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Issue 18 - July / Aug 2002
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REPRODUCING THE RECORDED ARTS

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► Features

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The joys of mono



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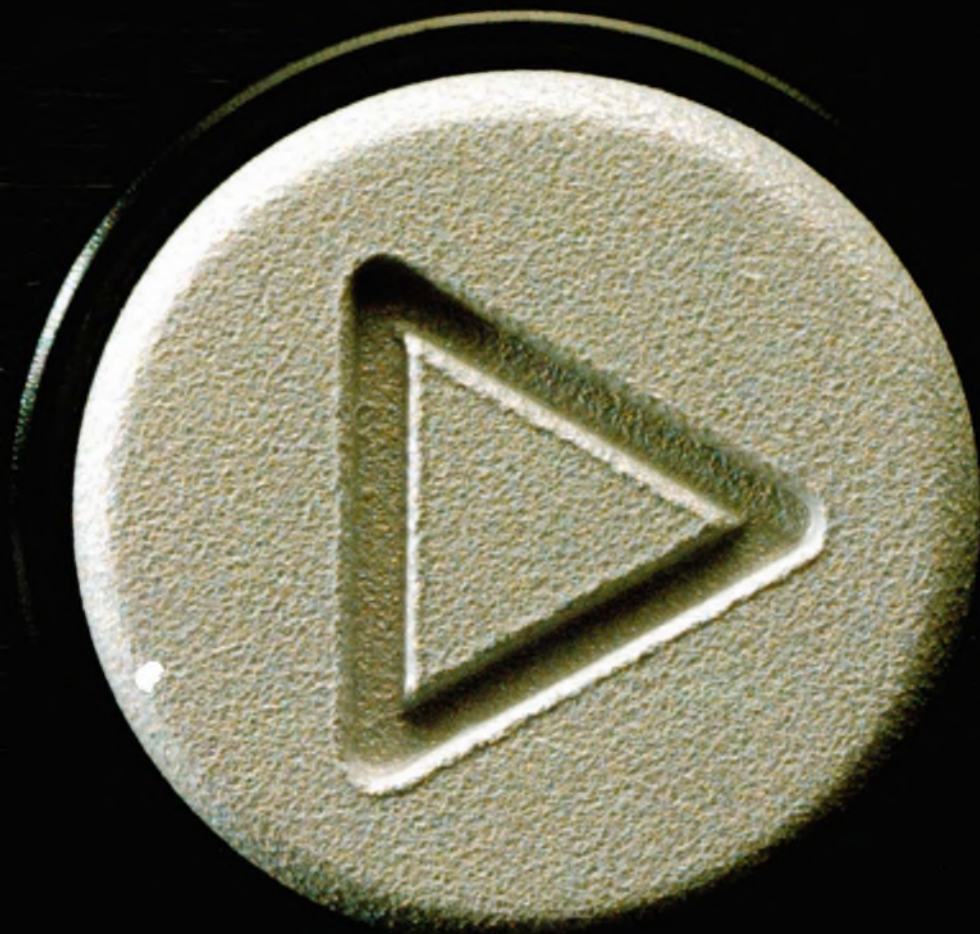
hi-fi+

REPRODUCING THE RECORDED ARTS

Issue 18 - July / Aug 2002

30 YEARS - and the best is yet to come

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1972 - 2002

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So many articles, so little space. The editor's lot is not a happy one.

With two major shows in Frankfurt and New York eating up pages, suddenly everything else is jostling for space. Then the Dynavector demands its dues and there's the feature on sub-woofers and before you know it there are more balls in the air than you're really comfortable with. Something's going to hit the ground, and in this case it was the letters pages and a few of the Pop and Contemporary music reviews. Never fear, they'll be back for the next issue, carrying a little extra weight from this one.

And talking of reappearances, next Issue 19 will also see the return of the restaurant reviews, back by popular demand no less. Looks like I'll be fighting the battle of the editorial bulge. The other downside is that petty cash doesn't cover gastronomic indulgence, even in pursuit of copy for the magazine. If only you knew how we all suffer...





Martin Logan Home Speaker Package
Home Cinema Choice Award Winner 2002
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right Descent
Sub Woofer

far right Odyssey
Hybrid Electrostatic
Loudspeaker System

below Theater
Hybrid Electrostatic Channel
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MARTIN LOGAN

eye to ear co-ordination

ABSOLUTE SOUNDS' commitment to Martin Logan has been rewarded with a line of hybrid electrostatic speakers so comprehensive that it now encompasses every permutation of home theatre, and a price band from entry-level to cutting edge.

Prodigy, Odyssey, Ascent and the best selling Aeon are the models marking a new era for Martin Logan. Having mastered the art and science of creating hybrid systems, with the awe-inspiring Statement Evolution 2, Martin Logan has applied the same skill to smaller systems suitable for a wider range of applications.

All speakers are immediately recognisable as Martin Logan products because of the peerless, room-friendly appearance, with the captivating see-through panels and furniture-grade finish. But it is sound as clear as the panels themselves, which mark the Prodigy, Odyssey, Ascent and also the best-selling Aeon for those purists with limited space as children of the Statement.

To provide a selection for all home entertainment needs have also been joined by the new Theater and Cinema centre-channel models, the Script, the Scenario and the awesome Descent self-powered subwoofer, to create the awards winning Home cinema loudspeaker system able to grace any size or shape of room.

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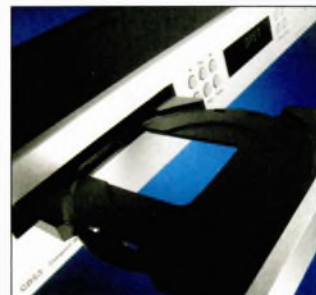
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"Special. Very special indeed. I was genuinely impressed by the SPMs, feeling that they established new standards in many important areas. The Valhallas have just rendered them obsolete as any sort of reference. 'Tis ruined that I am."

Roy Gregory Hi Fi + Issue 9

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Brian O'Rourke

(August 1930 – April 2002)

Brian passed away on the evening of Monday April 29 2002. He is survived by his wife Jean, sons Alan and Peter and daughter Jill. Alan, with Jill's husband Neil Adams took over the running of Ruark Acoustics when Brian retired in October 2000.

Brian left school at 14 years of age and found his first job as an apprentice making quality furniture. His developing expertise with glues and mass production techniques led him into building cabinets first for the pro music industry, and then a host of domestic hi-fi manufacturers, including Chartwell, Spondor, Rogers, Celef/Pro-Ac and Monitor Audio to name a few.

After so many years working with other companies, Brian decided it was time to do something on his own. Using all the knowledge he had accrued over the years in loudspeaker design in 1978 he started his own company called Diesis. Diesis made some fine speakers most notably the Solitaire but lack of financial resources and his rather too trusting nature unfortunately saw the business fail after 9 years hard work. This trusting side of Brian never changed,

but at the age of 56 when most people are starting to think about taking life easier Brian and his family moved house to repay their financial debts and with what money they had left, formed Ruark Acoustics. Working this time closely with his family, 16 years on Ruark is now known around the world as designers and makers of high quality handcrafted loudspeaker systems. Whilst other British manufacturers have sold out to foreign buyers and much is now made overseas, Brian was adamant that all Ruark systems will always be made in the UK. Most importantly, the Ruark name has become respected for the quality and design of its cabinetwork. This is something that always made Brian justly proud. Although now retired for a few years, the cards and letters of condolence received from people across our industry who have heard of his passing are a testament to how much he was known and liked. All talk of his undying enthusiasm and friendly nature that will be greatly missed

In these days of aggressive marketing and competition there are not many "gentleman" like him left. ▶+

Good Vibrations

Tom Evans' astonishing Groove phono stage finally has a matching line-stage to go with it. First glimpsed at the Bristol Show, The Vibe is now in production and initial listening suggests that its performance is just as staggering as its stable mate. In fact, it opens the window so wide that it suggests that The Groove may well be even better than we originally thought!

A classically simple design, The Vibe offers five line inputs, a tape out and a discrete stepped attenuator for volume control. It is housed in a similar Perspex box to the phono stage, but employs a small outboard supply. Styling extends as far as a pair of beautifully turned and profiled rotary controls. Those who want a remote control are going to be disappointed – nice to see someone who is prepared



to put performance ahead of the marketing imperative.

Internally, the circuit employed is a close relative to the phase corrective layout used in the Argo HR, but using superior silicon and a heavy dose of

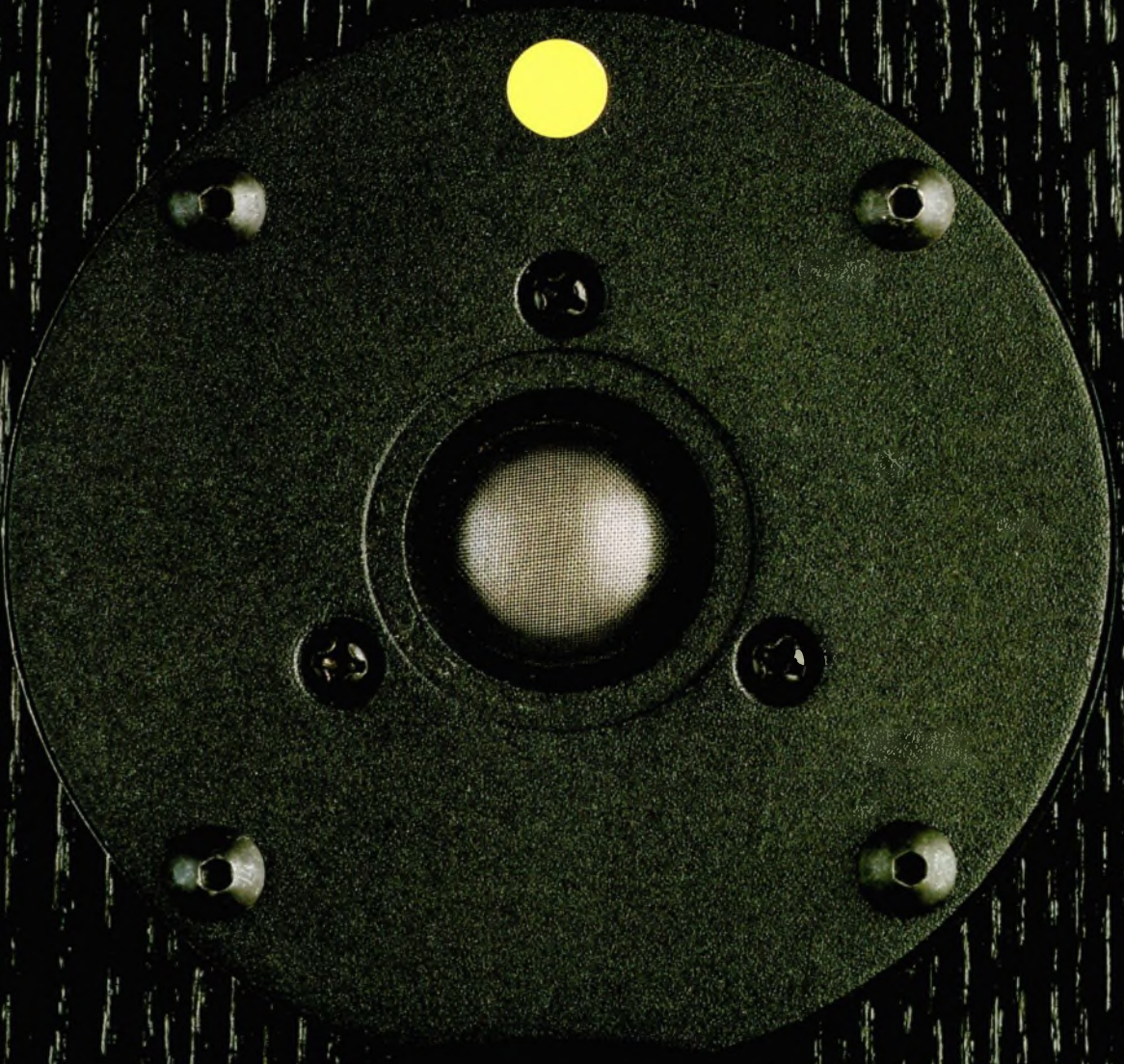
Lithos regulation. The result is an astonishingly low noise floor and massive dynamic range, but the star of the show is the discrimination of dynamic shifts and the precise portrayal of musical energy levels. You'll get the full skinny in the next issue, but for those who can't wait that long, contact:

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We can get away with this because we're proudly independent of any manufacturer or importer, and not constrained by having to cater for AV or multiroom as well, a decision we took right from when we started. Some have said it's commercial madness. We (and, luckily, our customers) disagree. There is still room for individuality and the aim of sonic perfection without multimedia strings attached. Come and hear what we have to offer - we think you'll be very surprised!

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The full Duevel range of omnidirectional speakers. Exceptional performance from the little Venus (£1795), the popular Bella Luna (£2995), and the imposing Jupiter (£7500).



The Nottingham Analogue Spacedeck (£862.50) and Hyperspace - pictured - (£1955), both priced without arm, are firm favourites here. They ooze quality and sound great; a lasting investment.



Conrad Johnson have been making some of the finest toob (sorry, valve) amps for as long as we can remember. The PV-10B Pre (£1495) and MV-60 Power (£2895) Amps demonstrate this perfectly and show the benefits of years of experience.

We now have all three new models from Audio Physic on demo (Avanti pictured) and what stunners they are.
Yara - £999
Virgo 3 - £3499 / £3999
Avanti 3 - £6599 / £7499
(prices for black / wood)



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A Tale Of Two Cleaners... Frankfurt High-End 2002

by Roy Gregory

Frankfurt is a show with its own unique feel. There's no other quite like it, and whilst every show has its own character, it's Frankfurt that stands apart, and Frankfurt that I always look forward to. This year was no exception, but for once no governing theme was able to emerge. Instead, chock full of the usual welter of wonderfully engineered and just weirdly wonderful products, this was a kaleidoscope experience, mind boggling and baffling at the same time. So, following normal practice, rather than trying to tell you about each and every new product present, I'll confine myself to those that caught my eye or ear. However, in the interests of organisational sanity I'll sub-divide the list by product category. Of course, there'll always be interlopers when more than one product appears in a single system, but if you can't legislate for life what hope have you got with a hi-fi show?

Digital Devices

Ironically, the big news at this show, at least on the two-channel digital front, was all to do with CD. The Format war grinds on, and there were plenty of new DVD machines, but these were all optimised for A/V rather than music playback. Instead, manufacturers seemed intent on demonstrating that there's still life in the old CD yet.

For me, one of the most exciting products at Frankfurt wasn't new at all. The re-emergence of the Helios players is good news indeed. These French machines offer stylish construction and exceptional performance at their

relatively modest price, and the latest versions are claimed to improve significantly over the originals. That'll have to await confirmation with the arrival of samples for review. The revised range consists of the Models 1,2 and 3 integrated players, plus the top-loading Stargate, available in both player and transport only versions. Finally, there's a DVD player built into the front-loading chassis, which designer Didier De Luca claims offers superior audio quality compared to other machines. Given his track record I wouldn't bet against that. The reappearance of Helios also means that owners of existing machines will have servicing and repair facilities available again, although both that and UK pricing will have to wait for finalisation of distribution arrangements. I can't wait as I still rate the Helios as the best sounding range of CD players, pound for pound, that I've ever heard.

Another welcome arrival was the redesigned Resolution Audio player. This created quite a stir when we reviewed it around 18 months ago: CT, CB and myself were all seriously impressed by this unassuming single box machine. Then it promptly disappeared from the market, supposedly for revisions to its transport mechanism. That grew into a total redesign, and what has finally emerged is visually unrecognisable compared to the original, which is no bad thing. Now a compact and incredibly solid looking two-tone design, it's also built into two narrower than midi, DNM width boxes. The demonstration, through DNM

amplification and revised and updated Second Rhethm speakers (now using a Supravox driver), suggests that its lost none of the musical substance and rhythmic integrity that made the original so appealing. It is expected to cost around the £3200 mark in the UK.

Also on show in the room were the Third Rhethms, a far more elegant and compact design strangely reminiscent of a scaled down B&W 802, at least as far as the way it looks. Of course it only uses a single drive unit! Both speakers showed markedly improved fit and finish over our original samples, and the Seconds also sounded far less coloured to my ears. But the big news is that the

variable output Resolution Audio CD player will soon be joined by a DNM derived amplifier in a matching case, making for a very compact (and very high quality) digital system. (Virtual Reality: Tel. (44)(0)1277-227355. Email. info@virtualr.demon.co.uk).

But prize for the most impressive CD player on show has to go to the three-box Metronome Kalista. This French company have a history of producing exceedingly elegant and good sounding machines, but with the flagship they've excelled themselves. The skeletal, acrylic top-loading chassis is a tripod structure reminiscent of



► Loudspeakers

The one thing you can be sure of is that Frankfurt will throw up a veritable crop of impressive, interesting or downright weird loudspeaker designs, and that's leaving aside the ones I've already mentioned!

It was nice to make the acquaintance of the Magneplanar speakers, longtime favourites of mine. The distribution arrangements put in place by the company make the prices in Europe astronomical in comparison with their US home market, which is a great shame, because the sound of even the small MG-SE, driven from a Metronome front-end and Roland electronics, displayed their characteristically open, seamless sound. It reminded me why I liked them so much when I owned a pair. (Audionord Tel. ++46-836-2240 E-mail. contact@audionord.se)

The little Wilson-Benesch Arcs were also offering their accustomed excellent (and surprising) sound, driven by the aforementioned Pharaoh amp. These diminutive stand mounts are capable of astonishing authority when called for.

Speaking of which, the KEF 207 References were demonstrating their own particular combination of micro dynamic discrimination, focus and wide dynamic range when called for. It was an impressive display.

Finally, from the UK stable, were Monitor Audio Gold series speakers in high-gloss lacquer finishes. The silver ones on show were particularly striking and further lift what is an



already impressive range.

The Vaic Lumen White speakers were also on demonstration. First seen in New York last year the original, ultra-expensive model (\$25k, ceramic bowl drivers and a diamond diaphragmed tweeter) has been joined by a smaller, all ceramic version at slightly more affordable price of \$16k. It retains the larger model's sumptuous finish and unique shape, and the fall off in performance seems minimal. That means you can expect astonishing clarity with clean, clean, clean transients and great transparency. If you want to know what the fuss about ceramic drivers is then this is a good place to start. (Net. www.livingsound.info)

It was also nice to see the Heil-AMT speaker systems, hybrids using the Heil driver crossed over to an upward facing woofer. The rather dumpy looking Kithara model has been joined by a slimmer, cheaper and far more attractive sibling, which should reach the shops at around the \$2200 a pair mark. Distributed in the UK by Audio Synergy, those who value, seamless, open, fast and airy mid and treble performance with seemingly limitless extension should seek them out. (Net. www.precide.ch)

It wouldn't be Germany with out a fair dose of the trumpets that signal spherical horn drivers. Avante Garde were playing their standmounted, dual concentric Solos. These include a 250 Watt amplifier in the cabinet, a passive crossover, but two feedback loops, one from each driver to help overcome non-linearities in the cross-over itself. Whatever the technology the sound was mightily impressive, and if the appearance is



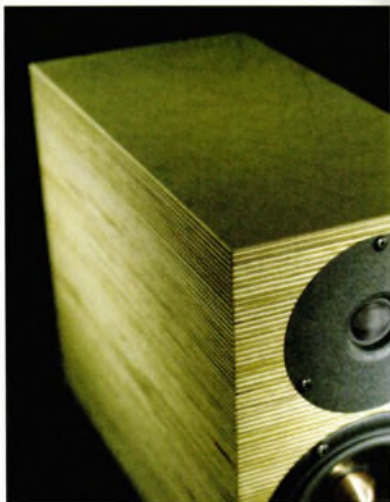
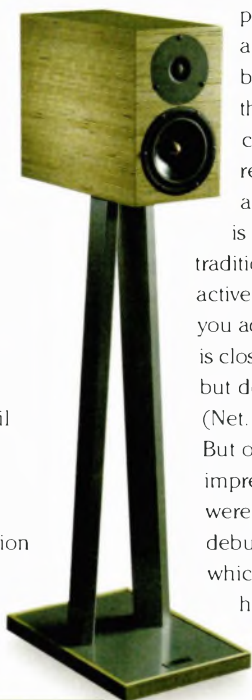
unusual, then the price, starting at \$3350 looks like a serious bargain. (GT Audio Tel. (44)(0)1895-833099 Net. www.gtaudio.com)

Meanwhile, in a brave move that should be emulated by other show organisers, access to large rooms is rotated, meaning that different exhibitors get a go. One result of this was that Acapella found themselves in a standard bedroom. Their



▶ decision to demonstrate the serious large, floor to ceiling Campanile model was vindicated by the excellent sound quality they achieved. Driven from the Clearaudio Master Reference record player and by Unison Research amps, this was a system that made a nonsense of the limited space available, with blindingly fast transients, breathtaking transparency and dynamics to die from. (Audio Reference Tel. (44)(0)1252-702705 Net. www.audioreference.co.uk)

Best smallspeaker awards go to Finnish company Penaudio and the innovative Voice Points. Of the two the Finnish design is by far the most conventional, a pair of stand-mounted miniatures being combined with an active sub-woofer, but the beautiful finish (a veneer cut from the edge grains of plywood) is matched by exceptional attention to detail when it comes to parts and construction. Driven by a Median one-box CD player and integrated amp combination the sound was open, lucid and articulate with excellent integration between subs and



satellites. Priced at £5000 including stands this system is far from cheap, but it more than justifies that price tag by dint of its performance and appearance. (Net. www.penaudio.fi)

The Voice Points can perhaps best be described as the shape of a pear drop, but twice as deep as they are wide. The cabinet is an aluminium casting with a full-range dual concentric drive unit mounted in the fat end. The other end contains active electronics and the whole thing sits

pointed edge down in a cradle stand, supported by peripheral rubber O-rings that also serve to damp the cabinet. Arguably, the resulting structure looks a lot larger than it actually is but the speakers retain the traditional virtues of small and active designs. Price, by the time you add an optional sub-woofer is close to that of the Penaudios, but does include amps.

(Net. www.voice-point.de) But overall, the three most impressive speakers on show were as follows. Clearlight debuted a modular system in which the cast RDC two-way head unit can be mated to a choice of three base units. Cheapest option uses a pedestal stand

that acts as a mechanical resonator to augment bass output. Next option up looks the same but adds drivers to the pedestal, while the full-on Symphony system uses a seriously large driver in another, moulded and asymmetrical bass cabinet. There's far more going on here than I could possibly cover in a show report, but we are hoping to have the entire system for review before the end of the year. If you can't wait that long then contact importer hififorsale.com for prices and further information.

The new Sonus Faber Cremona

Homage speaker sounded exceptionally sweet and engaging, driven by the strange, skeletal Blue Note CD player from France and Graaf amplification. The 13.5B pre-amp is familiar but I hadn't seen the Modena mono-blocks before (c£4000 each). The capacious soundstage was matched by the relaxed yet involving mid-band, creating what could well be my favourite Sonus Faber since the Electa Amator! (Absolute Sounds Tel. (44)(0)208-971-3909 Net. www.absolutesounds.com)

Finally, and best of all, Gryphon showed a new speaker, the Cantata. The price might be a wallet threatening £13000, or thereabouts, but you get an awful lot for your money. The speaker itself is a D'Appolito arrangement using a Scan tweeter and in house 5" Kevlar bass-mid units. The integral wing shaped stand contains the substantial cross-over, including an active Q control which allows you



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In the UK HiFi News wrote: "Through all types of music the GamuT D200 shows spectacular three-dimensional layering of the stereo sound stage." ...and... "excellent retrieval of ambience and an accurate rendering of the space around instruments."



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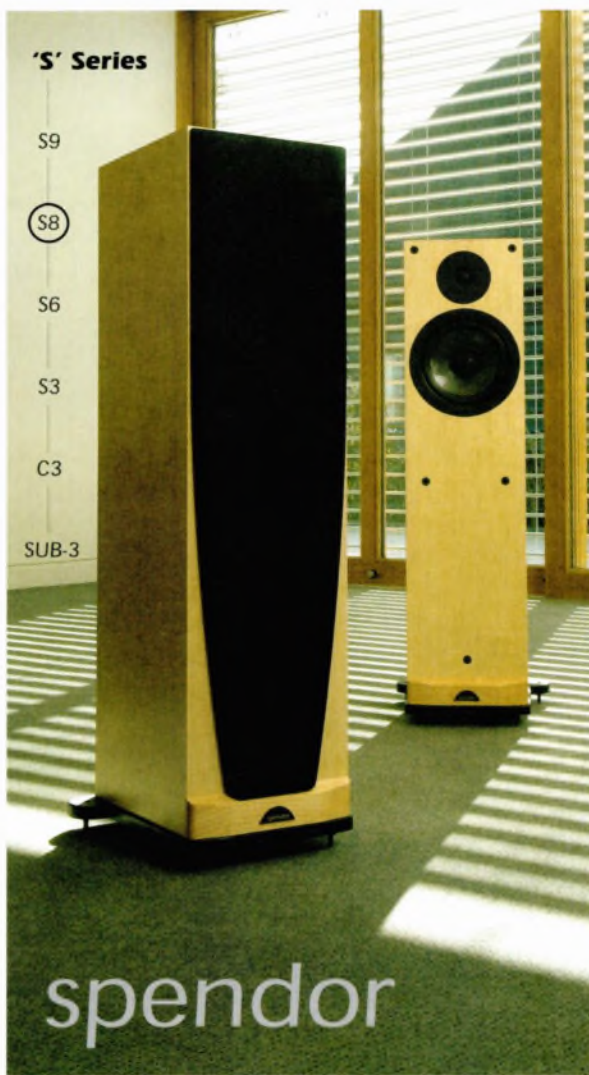
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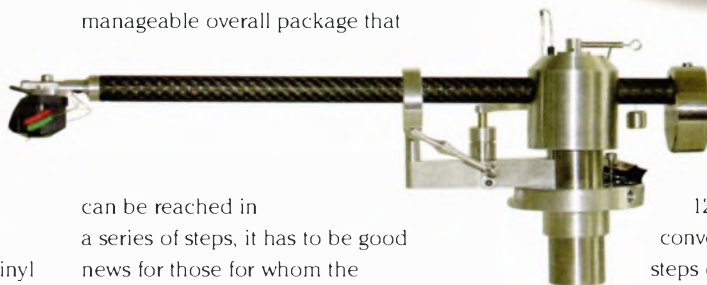
▶ to tune the bass output to the room's resonant characteristics. The solid structure weighs in at 70kg and is a composite construction to help combat cabinet resonance. Side panels can be provided in custom finishes to help soften the imposing looks. At 90dB efficiency and with a minimum 3.7Ohm impedance, the Cantata can deliver true 20Hz to 20kHz performance in room. Playing tracks from *Down From The Mountain* and the *Oh Brother, Where Art Thou* OST might have cleared the room but displayed a system capable of delivering both scale and intimacy, combined with dynamic and rhythmic integrity. Nor did it pull these less than hi-fi recordings apart. Not bad at all for a first attempt! (Net. www.gryphon-audio.dk)

Analogue Componentry

Germany boasts more, active vinyl re-issue labels than any other country in Europe. It also has its own Analogue Audio Association, a well-organised group who promote record use, re-press discs and provide a highly informative magazine. It's no surprise then that the Frankfurt show is always

awash with turntables and analogue accessories.

Clearaudio continued their single company assault on digital, showing their huge range of upgradeable turntables as well as a host of accessories. There was so much that I'll confine myself to just one product in each category. Most interesting turntable has to be the Maximum Solution (see NY show report), a half the height, half the price version of the monster Master Reference, armed with the TQ1 Souther tonearm. Three motors and the same double structure but rather more manageable overall package that



can be reached in a series of steps, it has to be good news for those for whom the flagship model is simply out of reach. Aesthetically, the best news is that the Accurate Power supply is now available in a silver finish, along with all the phono-stages, including the new, match-box sized mm/mc Micro Basic.

Cartridges remain much the same,

although there are now wood bodied versions of the moving-magnets too. However, hovering somewhere just beyond actual discussion hung the shade of a new super cartridge, the Veritas. Who knows whether it will ever appear, but conspicuous consumers should keep an eye in Clearaudio's direction. But perhaps the biggest news is a uni-pivot tone-arm. Using a substantial milled base, a sapphire thrust pad and a carbon-fibre armtube the same basic design can be produced in any given effective length, or even changed at a later date. Wiring is a single piece from tags to phono plugs, using Clearaudio's Sixstream cable. Price is also extremely reasonable, and whilst it is still to be fixed in the UK, should be in the region of £600.

Best accessory goes to the new 300Hz handheld strobe and matching



12" disc (it has conventional 50/60Hz steps on the other side). This tiny unit,

not much larger than the central locking control for a car offers improved accuracy, while the disc carries a blank groove so that you can set speed with the stylus running on the disc: Simple, well thought ▶

► through, effective and around £80 for the light and disc. (Audio Reference – as above.)

On the subject of setting up, David's showed a developed version of the old Denneson protractor which as well as easy adjustment also includes visual guides for vertical alignment of the cartridge, both for and aft and rotationally. (David's Tel. +49-201-856-7391 Fax. +49-201-721243)



Leif Hagmark showed a new version of the Air Tangent arm, with much improved VTA adjustment and refined electronics that allow auto lift-off and control of the pump from the arm itself. A low-pressure design it uses a Wisa pump in a combined surge-tank and sound proof chamber to ease placement. Also on its way is the first Air tangent turntable, a solid design with a sophisticated although not an air bearing. (contact@audionord.se)

Proving that not all turntables have to be ruinously expensive, STST showed an interesting design with a counterbalanced three-point suspension and mainly milled sub assemblies. Substantial engineering, including a 50mm thick composite platter, is hidden inside a conventional looking plinth, while price is a very reasonable £2600, which looks like a bargain considering the material content on offer. (www.stst-hifi.de)

Meanwhile Clearlight were

showing their new turntable system. Structurally based on the Recovery turntable that I like so much, the new Recovery Basic incorporate the control electronics into the sandwich plinth. It comes fitted with an Incognito wired Rega tonearm and sits on top of a Clearlight Aspect rack which is



included in

the price.

Oh yes, price?

In the UK, the whole package will set you back under £2000,

while delivering performance which is up there with the full-on Recovery, according to designer Kurt Olbert. Yes, the review is already scheduled, but this looks like an even bigger sonic bargain than the STST, even if it is made mainly out of wood! (hififorsale.com)

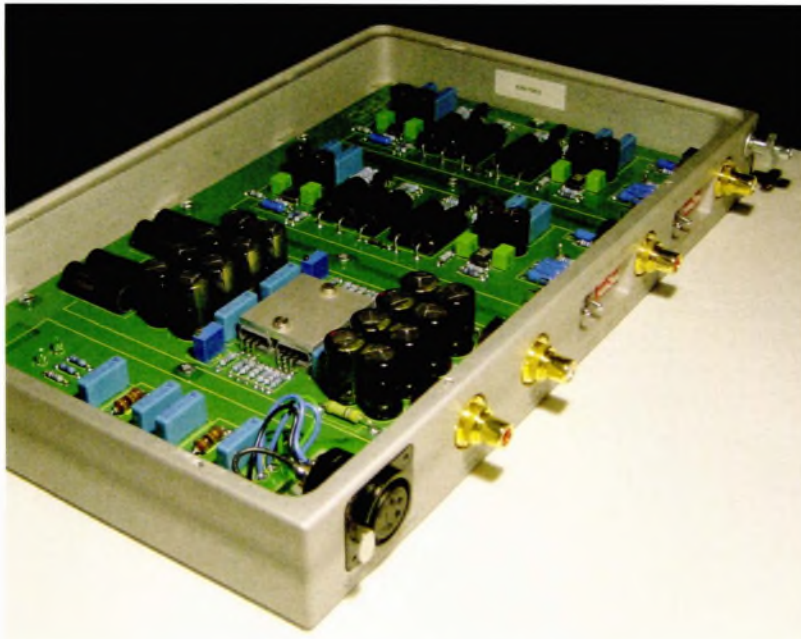
Final turntable in this report comes from Loricraft. The Garrard 601 is a skeletally plinthed and slightly simplified version of the established 501. Engineering of the idler drive and motor assembly is to the same ridiculously high standards as the built to order flagship, while the new plinth looks both more modern and allows a drop in price.

The unit on show was a simple engineering prototype, and details of the plinth, especially the machining of the uprights remains to be finalised. However, the plywood platforms are confirmed, and expect acrylic

versions later (which will allow you, for the first time, to enjoy all that engineering you've just paid for). (Loricraft Tel. (44)(0)1488-71307 Net. www.garrard501.com)

Two serious phono stages caught my eye. The Isenberg 845 is a serious assault on the state of the art. A solid-state design it is optimised for cartridges with an output lower than 0.2mV, a result of the manufacturer's love affair with the Jan Allaertz F1 cartridge. Probable price will be in the region of £8000. (Net. www.isenbergaudio.de) Still expensive but a whole lot more affordable is the new Silver Cube from Lehmann. The milled from solid aluminium chassis is longer and lower than previous versions, with beautifully clean internal layout. Gain and loading can be adjusted ►





▶ using external dip-switches and price will be around £1600. Given the stellar reputation of the Black Cube and its derivatives this should be one to watch (hififorsale.com)

The interesting ZYX cartridges were on show; available through Audioplan, which is in itself something of a recommendation. Bearing a startling resemblance to the late, lamented Monster Alpha Genesis, we have samples for review and initial results look very promising.

Accessories and Supports

Which leaves only the peripherals, and two of the most interesting products at the show! First though I should mention the expanding range of Pagode racks which combine modern looks with superb sound quality and finish (Audiofreaks), the new Nordost Valhalla digital interconnect that rounds out the range, and a new rack from Cyrus. Built specifically for their shoe-box electronics, it's an elegant, all wood



structure that supports each unit individually on neoprene pucks.

Finally then, I get to talk about my personal favourites, and they're both cleaning machines. The long awaited Clearaudio Matrix record cleaner is finally in production. Whilst it's far from revolutionary, it offers enough refinements on the basic recipe to move it ahead of the crowd. The nicely built chassis contains a top-loaded fluid

reservoir that is fed to the record by a self-levelling brush assembly. The record support is made of a conductive material which earths the record as it is cleaned, helping to prevent static build-up. Finally, it looks better built and finished than the competition, most of which trace their aesthetic roots to their hobbyist origins. UK price should be just below the thousand mark, and that too keeps it competitive.

But my Best product award goes to a CD cleaner that probably has more in common with the Dyson washing machine than it does with the competition. Built into a Y shaped drainage pipe, the junction sticks up at 45 degrees. This accepts the disc, while the base pipe acts as the fluid reservoir. Close the rubber sealed lid and the device pressurises to 2 Bar before swamping the rapidly rotating

disc in warm cleaning fluid, at a rate of 22 litres a minute!

The process, which involves much to-ing and fro-ing of the disc, including a spin cycle to dry it, is fully automated and takes about two minutes.

You get your CD back slightly warm and sparkingly clean. The cost of this device will be around £600, but it is

effective, pretty quite and above all, easy to use. It might sound wacky, but if I tell you that it comes from the same company that produced the mini lathe for trimming the edges of your CDs then you'll appreciate that it represents a giant step towards the mainstream! The Audio Desk Disc Cleaner is available through hififorsale.com. ➤+

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The Home Entertainment Show 2002, New York

by Roy Gregory

Hard on the heels of Frankfurt, with nothing but a few first category hills and some rather fine Pyrenean food in between, arrived the New York show. Some weeks later than last year, and thankfully without the high humidity heat wave and the frayed tempers that went with it, the organisation has certainly improved. But then, dispersed exhibitors were always going to be more of a problem in a 50 floor hotel served by four separate lift banks. Covering the 2001 show I felt like a human yo-yo, and frustrated visitors were coming close to blows as yet another set of lift doors opened (and promptly closed) on a packed interior.

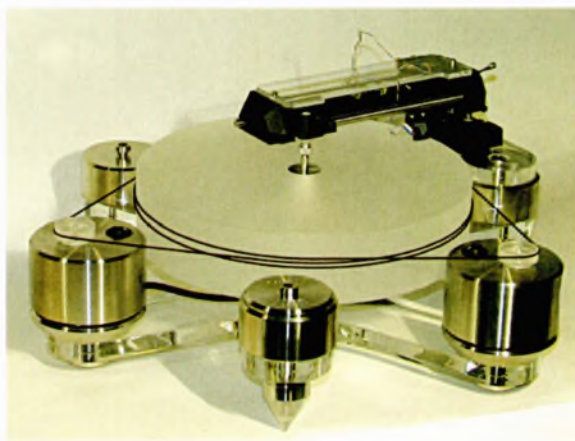
Perhaps people learnt from the experience and spaced their visits. Perhaps some of them simply didn't return. Whatever the reason, spreading the show over a mere six floors and the basement made for a far more relaxed experience. Unfortunately, the exhibitors didn't respond in kind, and both sound quality and the choice of programme material left a lot to be desired. Indeed the re-emergence of the audiophile percussion disc cast the Kodo drummers in the role of the Sith lords, returning from exile to cast the world of hi-fi back into darkness. Opposed only by the massed ranks

of salon jazz and innocuous female vocalists we need to find Luke and Obi-Wan right now! In fact, there was almost an inverse law in operation; the more expensive the system the more tedious its performance and the choice of programme material. But then, why should this be different to any other show? The lack of candle-lighting sonic performances didn't mean that there was nothing of interest to be seen and on all too rare occasions heard.

But before we get into that, you need to appreciate that the New York show isn't arranged on the same lines as the events you're more familiar with. The exhibitors in this instance are dealers, which makes for multi-manufacturer systems and a confusing deluge of new products all jumbled together. Which might make it hard work for journalists, but creates a rather more realistic (and potentially more interesting) situation.

However, even amongst the welter of systems and equipment there were certain individual pieces that stood out.

Several well regarded electronics brands showed cheaper ranges, amongst them Ayre Acoustics and Aesthetix. The latter's Jupiter series units, the Io and Callisto have long been regarded as reference contenders, especially the phono stage. Now, the Saturn series offers phono, line and full-facility options, all built into the same sleek single chassis. The tube circuits employ similar topology to the Jupiter series, including the separate transformer and power-supply for the heaters, and balanced circuitry. Inputs and ▶



► outputs are both balanced and single-ended, while all functions are remotely controllable. The Rhea phono stage offers three inputs, each independently adjustable (from the remote) for gain and loading. Maximum gain is 70dB and there's also a built-in MC cartridge demagnetiser. Price for the Rhea is \$3500, while the Calypso line stage costs \$4500. The Janus full function pre-amp combines the two, but with just a single phono input, for \$6500. Given the stellar reputation of their forebears, these should be well worth investigating. (www.musicalsurroundings.com)

Ayre showed the CX-7 CD player and AX-7 integrated amp, \$2950 each and built to the same exceptional standards as the companies' separates. Combined with a Clearaudio Champion Level 2 turntable and Unify tonearm, a Phonomena phono stage and driving a pair of Vandersteen 2CE speakers and a 2Wq sub-woofer, they provided a sound that was refreshingly relaxed, open and un-boxy. Elsewhere, the big Model 5 speakers, driven by a combination of Clearaudio Master Solution and the new Aesthetix electronics were similarly impressive. (www.vandersteen.com, www.ayre.com)

I finally got to hear the new, cheaper versions of the 47 Laboratory electronics, which offer similar diminutive dimensions to the more familiar Flatfish, Progression and Gaincard, along with a substantial slice of their sound quality. What has been sacrificed is the exquisite finish of the original designs, along with their quirky nomenclature. In comparison the new units look distinctly crude, although it's hard to argue with their performance. The 4716 transport is priced at \$1750, the 4715 DAC at \$1250 and the 4717 Integrated Amp at \$1500. This is all excellent news for those attracted by 47's eclectic approach but daunted by their price tags.

(www.sakurasytems.com)

Another company on the budget trail was Sim Audio, who introduced a new CD player, the Nova, intended to match their integrated amps.

But two companies were moving in distinctly the opposite direction, both with pre-amps. VTL showed the new 7.5 Reference line stage. This two box unit not only employs similar concepts to the Mark Levinson No. 32 reference pre-amp, it matches it for style and finish: Not bad for a valve unit. Weighing in at a cool 90lbs, the fully balanced audio circuitry is kept in a totally separate chassis from the remotely driven digital control electronics and multiple regulated power supplies. Paired with VTL's MB450 mono power-amps and driven from an Accuphase DP85V CD player, the system was completed by the bizarrely named DeVore Gibbon 8 loudspeakers. Add the fact that DeVore Fidelity contract their name to DeF and these guys have either got a serious sense of humour or a death wish! Fortunately, look a little closer and you find exceptional attention to detail in the cabinetry and component choices which hint at something distinctly unusual beneath the plane exterior. Certainly, the set-up was different, with the speakers standing halfway along the side-walls, but the sound was impressively quick, open and rhythmically integrated. Tonality was good and dynamics wide without being obvious, all of which bodes well both for the new pre-amp and its partnering speakers. (www.vtl.com, www.devorefidelity.com)

The other new pre-amp offering was a remote control, fully balanced line stage from Creek. Built around a specially developed and extremely sophisticated volume circuit which employs laser trimmed resistors etched directly onto a ceramic substrate, silver tracks and gold relays.

The circuit itself employs a mix of surface mount and conventional components and will also offer a balanced input phono option at a later date. The as yet unnamed unit should see the light of day around August, when it will be accompanied by a pair of balanced mono-blocks. Price should be well the right side of £2000. (www.creekaudio.co.uk)

On the speaker front the big news was the announcement of Wilson's Watt/Puppy System 7. In part this has to have been prompted by the success of the Sophia undermining the position of the System 6, but the end result is certainly radical with, for the first time, a new cabinet material for the Watt, new drivers in the Puppy and new crossovers in both speakers. The company claims significant improvements in performance. However, the bad news for owners of System 6 is that the old speaker is not upgradeable to System 7. Looks like the bottom just fell out of the used Watt/Puppy market...

Other speaker news came from Chesky, who launched a distinctly macho looking compact floorstander featuring isobarically loaded 6.5" bass drivers, 89dB efficiency and a non-reactive 6 Ohm load. Being a record label of note these guys should know how music sounds, and for once, claims of a monitoring heritage should add up to something. But the most interesting aspect of the project is that the speakers are only available direct, at a cost of \$3995, from the Chesky web-site. (www.chesky.com)

The Gershmann Opera Sauvage speakers were making impressive sounds again this year, as were Theil's diminutive 1.6 floorstanders, a speaker that redefines clean and clear. But the cleverest design came from Morel, with the modular MusicDeco system, a surprisingly elegant box featuring a flying tweeter, which can be used singly or stacked ►



▶ vertically or horizontally to fulfil both two and multi-channel requirements. (www.morehifi.com)

And if Bristol's cardboard speakers weren't enough, it seems that no show is now complete without some similarly wacky offering, with NXT being the principle culprits. This time the company is Ellula and the NXT exciter is used to drive an inflatable (yes, that means blow-up) plastic cylinder, available in a variety of shapes and finished as everything from a lava lamp to a can of Bud. Priced at \$45 a pair their appeal lies in their portability and the potential they offer as a promotional and marketing tool, but there's no denying their fun-factor or teen appeal either. How long will it be before these lateral approaches stumble on something that offers a real performance breakthrough? I wouldn't bet against it. (www.ellula.com)

Aside from the apparently near ubiquity of DCS processors and upsamplers there was relatively little happening on the CD front, apart that is from the Shanling CDF-100. This particular Chinese gem was discovered in the Music Hall room and carries hi-fi schizophrenia to new levels. Features? There's nothing this player doesn't have: top loading, HDCD, tube analogue stages and a seriously substantial chassis. In fact, upsampling seems to be the only trick it's missed. The aesthetics extend the general

theme, fearlessly mixing brushed aluminium, perspex, brass, gold and matt stainless steel in an open chassis layout that looks more like an integrated amplifier with a model of the star ship Enterprise perched on top. But the piece de resistance comes in the English translation, this time not limited to the instructions but deeply engraved on the top-plate. The skip buttons are labelled 'Fore' and 'Hind' and referred to collectively by the title 'Plunge'. It's wonderful; so wonderful that I want one and apparently I'm not alone. Roy Hall's smile was positively cherubic as he told me how many orders he'd taken at the show. Until that is, his countenance was shadowed by a dark cloud: "Oh God" he muttered in his Scottish lilt "I hope they don't all go wrong". Definitely a half-empty man then, eh Roy? (www.musicallaudio.com)

Analogue however, continues to flourish, particularly at the upper end of the market. Alongside new phono stages from the likes of



Aesthetix and Lamm there were weird and wonderful turntables wherever you looked, including the Walker Proscenium, reigning heavyweight champion now that the Rockport is no longer in production. The Walker carried a cartridge new to me, the \$4650 Magic Diamond from Switzerland. Details were sparse but it's further evidence of the continuing interest in high-end analogue. Elsewhere, those conspicuous consumers of aluminium and air-pressure, Vyger, were showing a fascinating integrated cartridge and arm-wand for their dedicated air-bearing arm. Built for them by Dynavector it displayed all that companies' traditional virtues, with an expressively rhythmic and unexaggerated presentation.

But the big news on the analogue front was the emergence of a new super turntable from VPI. Building on the development of the TNT into its Hot-Rod version, the new and as yet unnamed 'table employs the familiar four-square layout and air-suspension system of the earlier design. There the similarities stop. The massive floating chassis is now solid aluminium, carrying a huge inverted bearing system. The platter is now a three layer composite, recessed slightly into the top-plate, while the armboard for the JMW12" arm is also milled from solid aluminium. But the real changes are in the drive system that employs two motors flanking a central flywheel so that the entire drive set-up is now contained within the footprint of the chassis, making the new turntable an awful lot easier to accommodate than the TNT. Finish and price remain to be finalised, but expect the latter to be in the region of \$10000 including the SDS power supply but without arm. First impressions, through a CAT/Eggleston works system suggest that the new model retains the easy power and dynamics of earlier ▶

► VPI turntables, but offers another step along the continuum towards greater tonal accuracy first started by the TNT Hot-Rod. Not surprisingly, I'm looking forward to hearing it at home. (www.vpiindustries.com)

The soft-ware side was remarkably quiet, at least on the analogue front. Sony, on the other hand, were awash with announcements of new SACD titles and licensees. The biggest news for most potential purchasers is the announcement of 22 Rolling Stones titles available in August on hybrid discs, but that in itself is revealing. Hooray for hybrid discs (written off for so long as a mere marketing gimmick) but where are the new artists and current releases from established names? Without them SACD will continue to struggle as repertoire and availability continue to be its Achilles heal.

Which brings us, finally, to the question of decent sounding systems.

Honourable mentions go to the aforementioned Vandersteen based set-ups as well as the Lamm ML2s and L2 Reference pre-amp driving Karma Ceramique speakers. Fed from an EMT turntable via the new Lamm LP2 phono stage, this system displayed the clean, open neutrality and dynamic and rhythmic coherence I have come to expect from Lamm, albeit at a suitably stellar price. However, the good news is that Vladimir Shushurin is working on more affordable products that should see the light of day very soon. (www.lamindustries.com)

Another company meeting expectations was Legend who always seem to coax an astonishing performance from their simple push-pull amps and small two-way

speakers. They're long overdue a UK distributor and never fail to impress every single time I hear them. (www.legendaudio.com)

Chord and Wilson-Benesch combined their DAC 64 and integrated amp with the small Arc? Speakers to excellent effect, while Rogue Audio used an Arcam/DCS front-end to drive Meadowlark speakers, suggesting that their Magnum models add significant detail and finesse to the musical energy and integrity of the standard versions we've reviewed so favourably. Creek and Epos also turned in the sort of performance designed to embarrass bigger and much more expensive set-ups.



JVC/XRCD were demonstrating their latest discs on a Levinson/Wilson System 6 set-up that sounded excellent despite an appallingly intrusive and very drawn out groan from the door every time it opened. That prevents consideration in the best sound category, although this room receives a special award for Best Shoes At Show – by a mile! (www.xrcd.com)

Ensemble were also producing an excellent sound, one that mirrored

the appearance of their equipment: Small, monochromatic and perfectly formed. The DiChrono Drive and DAC were used to feed Art Audio monoblocks, in turn driving the Figura floorstanding speaker. The Ensemble electronics and speakers have always impressed, with their superb finish and electrostatic style sound. The surprise was finding them used in company with the Art valve amps, hailing from Nottingham but fitting right in. Indeed, the new Art Audio Adagio monoblocks have come over all Hovland, with acres of polished metal and blue-lit chimneys. Which is just as well as

these parallel single-ended 52BX valved units sell for \$10000 each!

(www.aaudio.com, www.artaudio.com)

But for me, the best, and certainly the most enjoyable sound at the show came from the Reference 3A MM DeCapo speakers driven by a Copland CD player and Antique Sound Labs parallel single-ended 300B amplifier. Modestly priced, particularly in the context of this show, it was a system that offered the life, colour, energy

and sheer musical enthusiasm so sadly lacking elsewhere. When it came to actually enjoying music this was an all too rare oasis amidst the sea of ultra high-definition mediocrity, and further enhanced the reputation of the astonishing little Reference 3As, the model at the show featuring a new tweeter offering better high frequency extension and refinement. And they were playing real music! (www.divertech.com)



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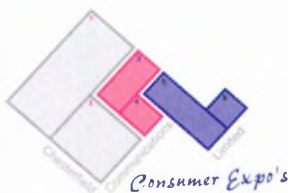
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Home Truths



by Jimmy Hughes

It's every audiophile's worst nightmare. Your mother in law decides she's coming to stay for a month. Which means (cue heavy brass) – der der der-der – severe curtailment of listening activities! It gets worse. My wife warned me she didn't like anything too loud. So I had visions of nothing but Haydn and Mozart played at a whisper for four or five weeks.

Actually, as things turned out, it wasn't too bad. Apart from some Ligeti, she never complained. True, I avoided heavy orchestral music or noisy rock. But for the most part it hardly mattered; I was able to play a wide range of material at normal listening levels without problems. Initially I worried in case volume levels were too high, but soon relaxed because everything felt so comfortable and natural.

The 'sound' simply wasn't an issue. I just put music on and we listened or chatted. And that was it. The very fact that it was possible to listen and hold a conversation at the same time, without the music becoming obtrusive, was highly significant. In my view, it's one of the clearest indications that certain fundamental things are right with your hi-fi system

One particular evening, my wife and her mother stayed at the dining table close by the speakers talking, while I sat about 3m away listening to a CD of string quintets by Brahms. It was remarkable; without being played loudly I could hear the music perfectly clearly, despite being sat well back from the speakers. While they were able to chat comfortably despite being close by.

Had the music sounded 'loud' and obtrusive, they'd have had to raise their voices in order to be heard over it. Doing so would've made it difficult (if not impossible) for me to listen. – their conversation would've dominated the proceedings. It could easily have developed into a contest, a battle, but it didn't. They were talking as though the music wasn't playing.

I think being able to do this is a testimony to the massive benefits of using speakers reversed so they fire against the back wall rather than straight at you. Had the speakers been pointing forwards, the right-hand enclosure would've been

less than a metre from where my darling wife and her mother sat. Being so close, I can't believe the sound wouldn't have annoyed them.

But, being able to talk over the music goes beyond speaker placement. Naturally I'm not saying you should be talking as the music plays. But being able to do so tells you how well your system is performing in certain key areas. A hi-fi system you can talk over has a comfortable presentation which makes listening easy and relaxing.

If, as the music plays, you have to shout to make yourself heard, then my bet is that (very likely) the overall presentation is aggressive and unpleasant. Any hi-fi system that sounds 'loud' and hectoring during climaxes makes listening a strain over extended periods. If it's a relief when you switch off, chances are the sound isn't easy to talk over...

Good sound should be 'comfortable'. And not because it's bland and featureless. It's perfectly possible to have a sound that's bold, vibrant and highly detailed - and still be able to talk over it. It's all to do with preserving space and separation between the different voices and instruments so that individual strands retain their identity.

The better your system does this, the easier it is for the ear/brain to make sense of what it's hearing. Because your brain has less processing to do, it's able to take in more information with less effort. It's not struggling to discern things like pitch, articulation, inflections of tone colour and dynamics. As a result, detail tells easily and comfortably.

I'm not precisely sure when I first observed that some hi-fi systems were easy to talk over and others weren't, but it was sometime back in the mid 1970s. Working in retail, I probably noticed certain equipment combinations were difficult to speak over when customers asked questions. It all went from there. But what exactly is it that makes sound easy to talk over?

Right from the start let's make one thing clear: it's a quality issue. It's not particularly dependent on hi-fi things like bandwidth, power, or dynamic range. Nevertheless, I would say that the 'bigger' your system gets, the harder it is to retain the relaxed naturalness that makes talking

▶ over the music easy and comfortable. The bigger your system, the more easily it gets into trouble.

Crucially, being able to talk over the music is influenced by the degree to which loud sounds blot out quiet ones when both are present at the same time. On one level this translates into being able to hear two instruments playing together at dynamic extremes – one loud, one soft – without the quieter one being totally submerged.

The relationship between how quiet a sound can be heard when a loud sound is present at the same time is called Working Dynamic Range. Musically, a hi-fi system with a wide WDR is very satisfying to listen to because you're able to hear all the inner backing parts clearly without the leading instruments or voices becoming overly dominant.

Any part of your hi-fi system can mess up Working Dynamic Range, but the source is without a doubt the most critical. In the 1970s, everything seemed to hinge on the turntable – and one in particular. The Linn LP-12 enjoyed something of a lead over all other source components at that time. Doing the talk-over test showed its superiority.

Fronted by a Linn LP-12, most systems were very easy to talk over. But only if the deck was properly aligned and adjusted. If the arm cable was poorly dressed, and/or the P-Clip clamping the cable wasn't tight, you'd lose that easy-to-talk-over quality. Although poor amplifiers and/or speakers aggravate the WDR problem, you can get away with much providing the source is outstanding.

Of course, recordings vary enormously in terms of WDR. Some mono jazz recordings from the '50s have uncanny clarity and separation, enabling you to hear every layer of vocals and instrumentation. Such recordings, although limited so far as extremes of loud and soft go, can nevertheless have an impressively wide WDR.

When CD came along in 1983 it fared badly in the talk-over test. Why? Because WDR was poor, despite the claims for enormous dynamic range. What the figures of 90dB 'dynamic range' really referred to was the gap between absolute peak level and residual noise – in other words, signal-to-noise-ratio – which isn't quite the same thing!

LPs cut from digitally recorded master tapes were better than CD, but typically not as good as pure analogue recordings. Talking over the music was a simple but effective way of demonstrating that WDR was lacking. As the technical performance of digital recording systems, and CD (discs and players) improved, the music became easier to talk over.

Coming up to date, it's interesting to try the talk-over test with a highly-evolved digital product like Chord's DAC-64. Switching between the various levels of buffering, there's a distinct difference. With no buffering at all, it's noticeably harder to talk over the music. By comparison,

it's like you're fighting to be heard, rather than speech and music peacefully co-existing.

To take things on a stage, try talking as the music plays and (while you speak) attempt to listen to whatever's playing. Using the Chord with full buffering I found I could combine listening and talking with far greater ease. The music didn't distract; you're somehow able to focus your mind on speaking, while retaining the ability to listen and take in fresh information.

If you switch the buffering out, it becomes harder to listen and speak at the same time – at least that's my impression – because the sound loses its depth and transparency. Such qualities must be absolutely crucial for those performing music live, or making multi-track recordings, if only so they're able to listen to other singers and players while concentrating on their own part.

For the passive listener at home, an immediate practical benefit that springs from all this is the ability to concentrate on music under less than ideal circumstances. I'm thinking of times when you're trying to listen and other people in the house are making a noise. Or maybe there's a busy road nearby that creates high ambient noise levels.

The wider your WDR, the less outside disturbances will spoil your enjoyment. A paradox here is that systems which pass the talk-over test will typically allow outside sounds to be heard with greater ease – for example, the telephone ringing or someone at the door. The difference is such 'disturbances' won't spoil your enjoyment, or make it impossible to concentrate on what you want to listen to.

Loudness is very much a subjective thing. A hi-fi system that passes the talk-over test is almost certainly adept at creating an impression of power and presence without actually being played that loudly. High resolution and abundant fine detail produce a sense of immediacy and attack without the need for brute-force decibel levels.

Given experience, you won't need to speak in order to know whether or not a hi-fi system passes the talk-over test. All you need do is listen and mentally calculate how loudly you'd need to pitch your voice in order to be heard clearly by someone sitting nearby. If the system you're listening to has a poor WDR, you might find it difficult to think over – let alone talk over!

Using the talk-over test when you're trying out different components or tweaks can help keep you on the straight and narrow. For example, I found that putting Townshend Siesmic Sinks under my Impulse loudspeakers greatly improved things in terms of the talk-over test. Which is interesting as, initially, I wasn't totally sure if the difference was an improvement.

It was easy enough to hear the changes made by the Siesmic Sinks. But at the time it was hard to say which of the two results was actually better. Both seemed good, ▶

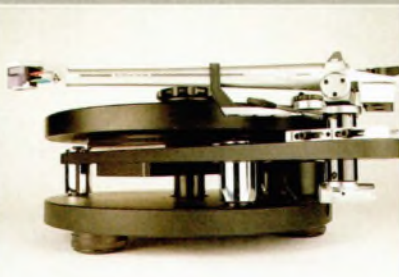
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▶ albeit different, making it tricky deciding which was best. This often happens when you're comparing pieces of hi-fi – right?. There's clearly a difference. But which one's truly better? Which one's correct.

There are no easy answers to such questions. But I'll say this; if I were comparing two items, and one was easier to talk-over, my vote would go with that item. Going back to my Siesmic Sinks dilemma, once I'd got them installed and spent a day or two listening, I knew beyond doubt they were right and had made a big improvement musically speaking. How could I have thought otherwise?

Yet, at the time it wasn't obvious. I couldn't seem to hear beyond a few superficial tonal balance differences. Without the Sinks, the sound was slightly leaner and more lucid and articulate – attractive qualities in themselves. There was a bigger more fundamental change behind

all this, but (for some reason) it took a few days' listening before it registered.

Doing the talk-over test immediately highlighted benefits that only became apparent with extended listening. That's why I like it. In all my years of involvement with hi-fi, it's still the only test I've found that goes beyond the subjective 'I like it/I don't like it' appraisal of whether or not something's good or bad. It's a sure reliable benchmark.

And my mother in law? Did she like the sound? I asked my wife afterwards, and she said – Yes – well, sort of. Actually, her mum hadn't really noticed the sound at all. It wasn't an issue, even though we listened every night for several hours. I take that as a big compliment. It's exactly what I'd been aiming for – a system you can listen to without noticing the way it sounds.



Careful with that axe Eugene...



by Jason Kennedy

What exactly is hi-fi for?

This might seem like a stupid question, especially coming someone who's used it for years and who's rhetorically asking it of others who have done the same. But sometimes it's the obvious questions that need asking, if nothing else so that we retain a healthy perspective on our hobby. You may have noticed that it's not as popular as it once was and I think it's our inability to appreciate good audio equipment's true potential that has contributed to this state of affairs.

First and foremost of course it's for reproducing music so that its artistic and technical qualities are clear and easily appreciated. What a lot of hi-fi enthusiasts seem to forget is that the equipment is a means to this end: the appreciation of music. If all you hear when you put on a great piece of vinyl is the dynamics, the ambiance, the depth of image and the bass slam then you need to take a step back and find some music that provokes a reaction that has nothing to do with hi-fi characteristics and everything to do with

musical art. You can tell you've succeeded in this quest when your thoughts or comments relate to the performance, the composition and the atmosphere that created that particular piece of music rather than purely fidelity related issues.

As a reviewer it's very easy to fall into the trap of only hearing the equipment, after all the name of the game is identifying the characteristics of the gear. But you can't do that without familiar music and the key to hearing through the gear is to play new, unfamiliar music, preferably of as broad a variety as can be appreciated. This way not only do you get to 'hear through' the hi-fi but you discover variations on music's ability to intrigue and entertain.

The tendency to play the same material over and over results in the Dire Straits syndrome that was the curse of hi-fi shows in the eighties and even early nineties. Other dem material has since come and gone but its always playing second fiddle to the hardware and that, to



"The end result is that rare hi-fi component whose physical presence simply recedes into the background leaving the listener joyfully enthralled in the music.

Rarely have I ever encountered such magical music-making in my many years of listening to audio equipment."

LISTENER magazine, December 2001.

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▶ anyone who likes music, is ridiculous. This is one reason why many musicians show little interest in hi-fi. The other is the limitations of recording media, but that's another topic.

But I digress. So hi-fi's first purpose is to replay music so that the listener can appreciate its finer points. Moreover the listener can benefit in a variety of ways from the pursuit: music can alter mood, communicate the full gamut of feelings and, on rare occasions reveal great beauty. Because music doesn't require the brain to translate visual information the senses can be harnessed in ways not available with the average domestic leisure pursuit. A great musical composition and performance can take us to places that only dreaming can approach. In a way purely listening to music is a form of dreaming, it's an escape from normal rational processing of information into a state of semi-meditation where aural clues dictate the activities of the mind. A lot of music has the ability to transport the listener to another world, creating a form of altered state, and the more intensely you listen the greater the chance of reaching such ethereal planes. I also feel that the less specific or literal music is, the greater scope it gives your imagination. Purely instrumental music has the greater potential for abstraction in this respect and offers the listener greater freedom of thought than compositions where lyrics create a specific guide.

Harvey 'Gizmo' Rosenberg, the late OTL tube amp enthusiast and greatest hi-fi scribe ever, knew what hi-fi was for and spelled it out in his classic tome *The Search For Musical Ecstasy*. In it he explains how listening should be a ritual complete with handmaidens and exotic balms, some or all of which may have been pure fantasy but the point is he didn't approach the listening casually. Rather he refined it into an art wherein he opened himself up to the beauty of music and nothing else was allowed to disturb the flow. The nature of listening for most of us is rarely this focused, real life tends to get in the way as, ironically, does the kit we use. So if you can, make the effort to use your system as intently as you might a computer or TV, focus your energies on the music it produces to the exclusion of everything else.

Another use of hi-fi is to bring people of like taste together to appreciate great music. This happens at concerts to an extent, but the intimacy of the domestic setting can create a great bonding experience as well as a way of discovering new music. I regularly entreat friends to come over and spend the evening playing great music at proper volume levels. We have a famous time and get to know new music properly. We play a diverse range of material either taken from my own collection or stuff people have brought along and in our more relaxed moments become totally enthralled by the

musical marvels unravelling before our ears. The chances of appreciating how good something is if you hear it on the radio or TV are pretty slim, and cannot compare with hearing it live and direct on a great hi-fi. So coerce your mates into bringing round their favourite discs and LPs. Chances are you'll hear something you want to play again.

The bonding element is important too: Men (let's face it, how many women ever just listen to music in a group?) don't have too many civilised ways of relaxing together unless lager and/or football are high on their list of priorities. Even then you are not sharing the fruits of your music hunting labours, which while not creative in its purist sense is often a labour of love. Appreciation of specific music is partly what brings teenagers together and the effect does not dilute with age so long as people are still interested. Even those who have not actually sat down and listened for years can be inspired if you put them in front of a decent system and let them find stuff to play that they can relate to. But having buddies with whom you can agree on which Zappa albums are the best (*One Size Fits All* ain't bad) is a real boon. Working in this industry should improve your chances of finding such people, but it's not as easy as one might hope because we are more likely to get distracted by the technical or subjective aspects of the equipment, not to mention the business.

Enjoying great tunes with friends must be a surrogate for being in a band. Having never mastered a musical instrument I can't claim to have been in that situation but imagine this to be the case. Air instruments can even be used to increase this effect so long as the hilarity of the situation doesn't escape the room!

Then there's the ability of great hi-fi to reinvigorate your old records and discs, the ones that you played to death ten or more years ago but which now have become a part of the furniture. I remember rediscovering Steely Dan, who I'd liked in my teens but kind of taken for granted for at least ten years. It was a positive revelation when a friend came round and put it on at a proper volume. It sounded better than it had ever done in the past and we subsequently played all my Dan albums and have continued to do so. The same cannot be said for all music alas. Some of it has its time and that time has passed, but it's always worth a try just to hear what you've got. It costs nothing and if you've been buying music for some time you will be surprised. The key is to find what it was that turned you on to the music in the first place. A good hi-fi should be able to do that no trouble: after all it's bound to be better than what you heard it on originally. Those systems in the common room were pretty basic after all!



Sound Affects



by Alan Sircom

As someone who wholeheartedly accepted the home cinema revolution in the mid-1990s, you might think I would be equally enthused about multi-channel audio replay. Sadly, that's not the case.

DVD-Video and home cinema digital surround sound systems brought a whole new thread to the home entertainment party. They brought films into the home with an increasingly high degree of fidelity, just like records did for music enthusiasts a century earlier. They also added an entirely new sub-species of enthusiast, a new geek-speak vocabulary and gave journalists something to write about.



DVD-Video became the fastest selling consumer electronic concept in history and, despite being still in its infancy, now resides in one in ten UK homes. It's not hard to see why either; in picture and sound, it is demonstrably better than the VHS alternative and is more 'consumer-friendly' than the larger, now-forgotten LaserDisc. Better still, the learning curve for manufacturers was relatively light, as they had already invested in digital engineering skills to get a foot in the CD door.

This made consumer electronics manufacturers complacent and willing to try new technology on the public. 'If DVD-Video is such a massive success' the logic goes, 'then

surely we can produce a new music carrier that matches that success?' This created the DVD-Audio/SACD tussle that is plaguing high-end music systems today.

This 'let's make another DVD' plan is a flawed argument, for a number of reasons. First, part of DVD-Video's appeal was that it 'puts films on CD', the general public has become very attached to the 12cm polycarbonate disc, but not very good at differentiating the finer points of distinction between them. Collar a passer-by and they will likely be able to distinguish three flavours of 12cm disc; music CD, computer CD and DVD-Video. You might get lucky and find someone who adds CD-R or even CD-RW in there, but talk about CD-Text or DVD-Audio and you'll get a blank stare in return.

Second, DVD-Video is proving to be a hurdle in its own right. The 'Video' part of the name 'DVD-Video' is effectively invisible; people buy software 'on DVD' and do not make the distinction on what kind of DVD it is. The majority of DVD-Video player owners think that their Mariah Carey DVD-Video is a DVD-Audio disc because it has music on it. What the industry is trying to do with DVD-Audio and SACD is as difficult as attempting to explain the difference between MOSFETs and

transistors to someone who is about to buy a clock radio. At best, it appears useless information to the consumer; at worst, it disenfranchises them entirely, preferring to wait until the format war dies down, lest they end up with the Betamax of the 21st Century.

But to my mind one of the most significant stumbling blocks to new surround sound music formats is surround sound itself. Although sales of DVD-Video have gone through the roof, attendant sales of home cinema receivers and speakers have not risen as dramatically. Of course, more home cinema kit is being sold, thanks to the sheer number of DVD players in circulation, but the numbers ►

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▶ don't suggest that every DVD-Video owner has a burning desire to add surround speakers.

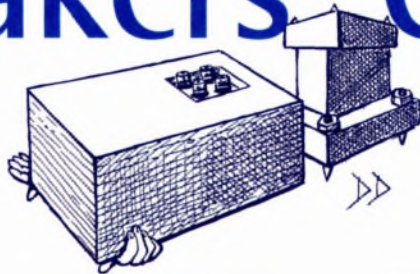
Most surround sound TV manufacturers will admit that the speakers supplied with a TV set are often left in the box, even if the owner has a DVD-Video player. The all-in-one DVD home cinema system is at least a step in the right direction for surround sound, but few of these have speakers of sufficient performance to get decent quality CD audio, let alone cope with the increased bandwidth and resolution of SACD or DVD-Audio. Through such a system, these multi-channel formats don't offer better than CD sound; they simply offer more than CD sound. And that alone suggests what direction the disc manufacturers will take in order to make SACD or DVD-Audio take off.

At first, I had great hopes for the formats. The first

run of stereo only SACDs, mostly back catalogue classics, offered a chance to hear people like Miles Davis in a manner only someone with access to the master tapes had before. While such releases are continuing to stun listeners and justify the format, this is commercial suicide in today's quick hit market. If DVD-Audio and SACD hardware is starting to appear in affordable systems, companies will pin their hopes on multi-channel Britney Spears discs and the like. And that will spell the end of these formats as the audiophile's friend.

Perhaps I am too harsh on DVD-Audio and SACD. They are beginning to take hold in the US and some of the SACD stereo recordings are true masterpieces. But I can't help feeling that these are the glory days for next generation music carriers. It's quantity, not quality, that's in the pipeline. ▶+

Speakers Corner



by Paul Messenger

Reader equipment health warning:

DON'T TRY THIS AT HOME!

Last issue's Speaker's Corner had nothing to do with loudspeakers, but looked instead at Rega's lovely new RB1000 tonearm, and this column is very much a follow-up, linking up with an extended feature on Linn mods elsewhere in this edition. I promise to get back to speakers – and the knotty concept of acoustic 'squareness' – next time around.

The RB1000 has the most beautiful top end, probably because it has the tightest gimbal bearing tolerances on the planet. I first met it mounted on Rega's P9 turntable – itself a very clever device, distinguished by 'solid' construction, a rather unusual outboard power supply for the motor, and a pure white aluminium oxide platter.

However, P9s are in very short supply right now, and I still have a strong sentimental attachment to the Linn Sondex I've been using for the past 25 years or so. I've always liked the Linn's 'warmth' and richness, especially in combination with Naim's ARO tonearm and Armageddon transformer power

supply. But I also wanted the RB1000's extraordinary detail and powers of analysis, so decided to try putting the two together.

Rega's Roy Gandy has been a good friend for as long as I've been in the hi-fi business, so he was happy to help out. Angie looked out for a 'cosmetically challenged' but 100% performing RB1000 for me, and then Roy suggested I might also like to try driving the Linn motor from a P9 power supply – an intriguing prospect I could hardly refuse!

What sounded easy enough in theory turned out to be rather trickier to put into practice, so I wouldn't recommend that others follow the same path, but I have to say the end very much justifies the means, and the resultant 'hybrid' does an excellent job of spinning and tracing the vinyl.

Although there are plenty of exceptions, a lot of respected belt-drive turntables, including Regas, Linns and the original Roksans, to name but three, use the same basic Impex/Philips synchronous motor. Just how they use them is where the variations and subtleties come in. Indeed, the whole turntable drive thing is a minefield of conflicting approaches and opinions, in its way every bit as complex ▶

▶ and interesting as loudspeakers.

Just like with speakers, the turntable designer has a whole raft of often conflicting variables to balance out. High platter mass gives high rotational inertia, but can also lead to main bearing friction and/wear. High motor torque can substitute for rotational inertia, but can also increase the amount of vibration generated by the motor.

Increasing motor drive sophistication has been one of the more obvious long term turntable trends. The LP12, for example, has gone through at least four iterations of increasing complexity over the years, from the original via the Valhalla updates to the outboard Lingo unit. Rega also uses different degrees of electronic sophistication in its motor drives, from the relatively simple circuits used for the Planar 2 and 3 designs, via the more elaborate but built-in P25 drive to the elaborate outboard twin-amplifier arrangement used by the P9.

As the years go by, more and more electronic devices find their way into peoples homes, and more and more invisible RF radiation fills the aether, all of which serves to make the mains electricity supply dirtier and dirtier, and all of which consequently interferes with the smoothness of the sine waves which are used to power the synchronous motors that drive many belt-drive turntables. Most outboard turntable supplies, whether electronic or transformer based, are therefore used to generate a motor drive sinewave which is cleaner than that available from the mains today.

Rega's P9 supply does this, but also goes one step further, by addressing limitations inherent in the motor itself. The Philips/Impex motor is a 24-pole device, arranged as two banks of 12. As with all mass-produced precision items, basic consistency is pretty good, but there are still slight variations between samples. The P9 supply therefore consists of two distinct amplifiers that address these two banks of poles separately. Internal presets allow the parameters of each amplifier to be 'tuned' in order to minimise the vibration inherent in each specific motor.

However, to facilitate this approach, Rega uses a 24V version of the motor, rather than the 240V types used by Linn (and in cheaper Regas). That means that in order to use the Rega supply to drive a Linn, it's necessary to change the motor. Which in turn means removing the Linn drive pulley from its 240V motor (very tricky!) and fitting it onto a 24V motor (quite tricky!).

With that in mind, I happily took up Roy's offer to go over to his place to do the modifications. He's a much more experienced and intuitive engineer than yrs trly, with a much bigger and better toolkit to boot. He also knows a bit about making turntables.

I'd originally planned to convert my own regular Linn, but then remembered a late-1970s example that Pete left with me for safe keeping when he emigrated to the States fifteen

years ago. This had the major advantage of being fitted with a Grace 707 tonearm, which has exactly the same geometric requirements and substantially similar armboard cutout as a Rega tonearm.

Fitting the tonearm therefore proved quite straightforward (especially as this Linn lacked the corner reinforcements that came along in the 1980s). However, with hindsight it might have been a mistake to transfer my Naim Prefix head-amp over to this Linn. The Prefix is mounted directly beneath the armboard, obviating the need for tonearm lead-out wires, but this meant making and fixing a corner piece to act as a mounting for the Prefix, unsoldering the RB1000's arm cables from the exceptionally fine and fragile wire used within the arm itself, and finding some means of securely attaching these to the much heavier Prefix input wires. Fortunately, Roy's pretty nifty with a soldering iron too, but I was very glad I hadn't attempted to tackle this task by myself. Fitting my Linn Arkiv B onto the RB1000 was the relatively easy bit, and we even, after a little careful work with a needle file, managed to use this cartridge's third 'tripod' fixing screw.

Although it took much longer than I'd expected, eventually the job was done, and I could start spinning a few discs. Not surprisingly, the sound was rather different from before. Rather more surprisingly, it seemed closer to a P9 than an LP12.

The romantic side of me does rather miss the warmth and richness that was always part of the LP12 experience (one reason why I preferred Naim's Armageddon/ARO PS/tonearm combination to Linn's Lingo/Ekos). But I absolutely love the neutrality, and the fact that the record player as a whole seems to get right out of the way of the music making.

Some might regard the end result as a trifle 'unvinyl-like', but to these ears the suppression of typical vinyl artefacts is a major plus, in the quest to peel off the layers of obfuscation that separate the musicians from the ultimate listener, and take one closer to the master recording. This might not always be 'pleasant', but it is usually truthful. For instance, it did nothing to hide – and indeed tended to make more obvious – the irritating master tape wow and flutter on Nirvana Unplugged, an otherwise favourite album of mine. There's a reassuring solidity about this turntable which in some ways reminds one of CD, but without any digital artefacts of course.

If you want your vinyl reproduction suffused in a roseate glow, like wearing tinted sunglasses, this is probably not your sort of turntable. But if you want the truth, the whole unvarnished truth, and nothing but the truth, this curious hybrid has plenty going for it. It delivers a broader bandwidth and a wider dynamic range from vinyl than anything I've heard here to date. And, yes, it knows how to boogie too.



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DYNARECTOR

Why the best surround sound isn't surround sound at all...

Or, why Dynavector's DV ADP-2 SuperStereo processor isn't quite what it seems.

by Roy Gregory

Take a small, slimline separates size case and build a couple of channels worth of amplification into it, along with all the in and outputs to connect it and a few extra speakers to a standard stereo system and what have you got? That's easy: a surround sound processor of the type that most of us will recognise even if we don't own or use one. Well, that's one answer, but in this case it's the wrong one. What you've actually got is a Dynavector DV ADP-2 SuperStereo processor. But before you cry "Foul!" and turn imploring eyes to the referee, I'll happily admit that it's an easy error to make. I mean, this thing sure as hell looks like a surround sound processor, offers much the same constituent elements and, musically speaking, does a pretty similar job, which pretty much makes it a surround sound processor as far as most people are concerned, right? Well, yes – but there again no.

In fact, the apparent similarities are entirely coincidental and grow out of the market context rather than any technological or philosophical congruence. It's a simple truth that most of the serious music listening that gets done happens on two-channel systems. Any attempt to improve upon or enhance existing technology is going to be best presented in the form of a simple add-on box. So, whether you want to sell someone Dolby 5.1 surround, THX, or Dynavector

SuperStereo, the message is going to arrive in much the same form, regardless of content. Just the same as it did for Hafler or Ambisonics. The trouble is, that as with so many technological hegemonies, home cinema is so dominant, its language so ubiquitous, that just the same as all vacuum cleaners are Hoovers all add-on processors become 'surround sound' units. Underneath the familiar appearance, the Dynavector is something else entirely, and if its lack of controls is grounds for suspicion, then rest assured that as far as an industry that brooks less dissent than New Labour is concerned, the internals are downright seditious.

You see, the thing is that although SuperStereo's declared aim isn't that far removed from the stated objective of multi-channel music systems, be they 5.1 or discrete in nature, it approaches the problem from a completely different... no – let's make that fundamentally different premise. Worse, its departure point is a philosophical critique of two-channel that damns the outgrowth to 5.1 by default, simply because the multi-channel technology incorporates exactly the same conceptual flaw as its two-channel parent. It's a view that borders on heresy as far as the industry is concerned. Manufacturers look at 5.1 and its related technologies as a desirable convergence of home-entertainment and computer

technology: hi-fi dealers look on home cinema as the cavalry riding in to save them from a faltering two channel market. It's a dangerous situation, because the last thing anybody pinning their hopes on a cash-cow wants to consider is that the beast might have BSE. Decisions have everything to do with profit and little or nothing to do with quality. In this case that B might well stand for Betamax! The industry omerta means that the last thing anybody wants to do is rock the boat. They've picked their horse and they'll ride it as far as they can, even if that means over a cliff and into the chasm beyond.

Unnecessarily apocalyptic? I'm not so sure. I have the gravest reservations about Dolby derived surround systems, and discrete multi-channel too. Those qualms are based on the sonic results I hear. The reason for the doomsday scenario is that SuperStereo is no Jonny come lately, after the fact, missed the boat piece of hindsight. I first heard the Dynavector demonstrated (extremely effectively) nearly fifteen years ago now. Yes, and I was just as guilty of ignoring it then as everybody else. Two-channel was so firmly entrenched that it seemed unassailable while the fledgling Dolby Surround was an anachronistic toy for use in the minority home-theatre field. Unfortunately, I'd argue that it still is, whereas (too) many people who

▶ probably should know better argue (or are resigned to the fact) that it represents the future.

The growth of home-cinema needs no comment from me. The adoption and development of a de facto surround standard was as much economic necessity as it was common sense. The problem is that in being driven by the Cinema industry, and Hollywood in particular, its subsequent development into Pro-logic and then 5.1 (and beyond) has everything to do with the demands and desires of that industry. To assume that those concerns are one and the same with those of the music industry and the serious hi-fi listener is a leap of faith of



Chamberlain-esque proportions. Unfortunately, two-channel advocates had their heads in the sand (or up some part of their anatomy) for so long that by the time they woke up and smelt the roses it was pretty much a case of Hobson's choice. Rather than indulging in a serious reality check and a bit of close personal critique it was so much easier to see the bright side. Nice new houses! What does it matter if they represent a ghetto with a serious lack of self-determination and a rather short life expectancy?

What has driven the development of cinema surround technology is the desire to enhance the cinematic experience. That means more atmosphere, wrapping the viewer in an all enveloping sound field. It means more impact, with dynamic range requirements shared between more

channels. It means the advent of 'steerable' effects as bullets ping past the watchers' ears or planes roar overhead. However, lest we forget, most movies are escapist in nature (especially the ones that rely most on the attributes I've just listed). They have the loosest possible relationship with reality. What they want to do is improve on it. Taking the technology designed to do that and assuming that we can apply it to the recreation of musical performances is dangerous indeed. People started off building rally cars out of everyday saloons designed for

quite a different purpose.

But as performance became more important the situation was reversed until now, the best rally cars are designed from the ground up to be just that. The manufacturers wrap them in something that looks kind of like a family hatch-back, and then offer the result to the public at a very high price and in very small numbers, just to acquire 'production' status. Sound familiar at all? The trouble is that if we're not careful we're going to be left in a situation where the best we can hope for is the kind of 'hot-hatch' beloved of teenagers and insurance statistics waiting to happen.

The trouble I have with all of this (and I love the cinema) is that I don't remember any lack of suspense or atmosphere the first time I watched Psycho on a black and white TV. Superior tools can produce a better result, or the same one cheaper or quicker. If you don't believe me then

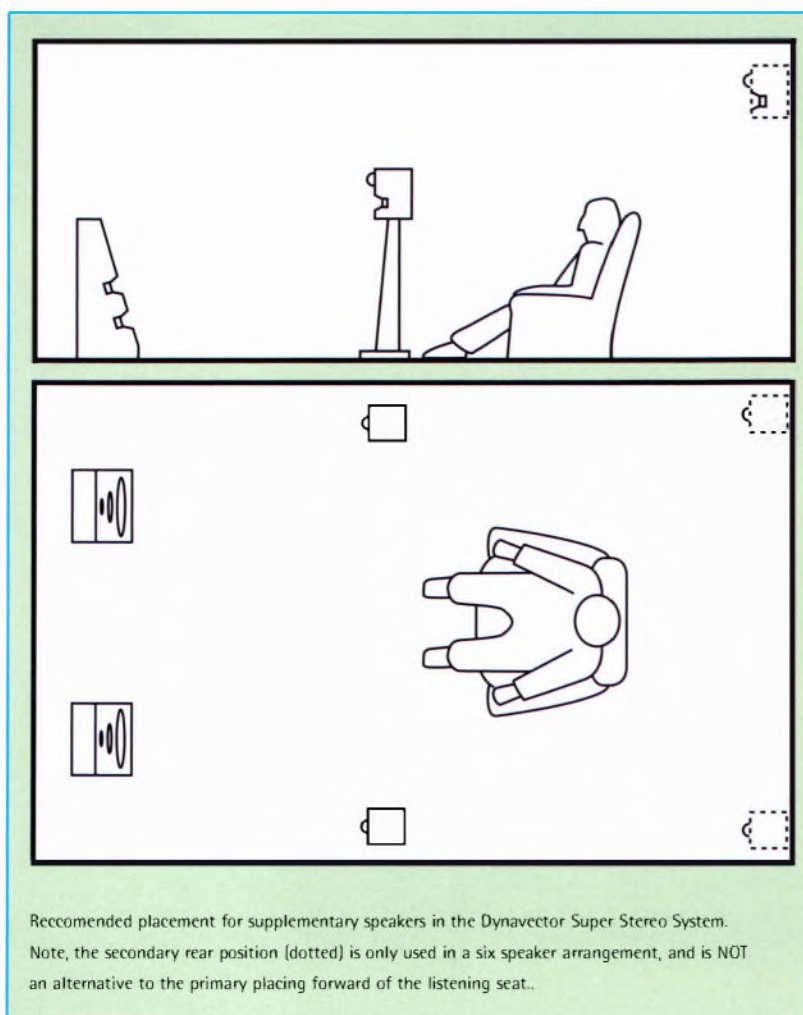
just think about digital special effects and what's happening to the way that movie-makers are starting to spend their budget.

By now you might well be wondering what all this has to do with the Dynavector, and even more importantly, what it has to do with music in your home? Well, the difference between what SuperStereo does and, more importantly, how it does it is that it sets out to improve the musical performance of your hi-fi system. It's a rather different departure point than your local multi-plex.

As an analogue manufacturer and innovator of considerable note, Dynavector founder Dr Tominari was dismayed by the decline in interest in hi-fi systems. Unlike most of the industry he didn't look for ways of trying to rejuvenate the market by simply extending or repackaging the existing approach. Instead, he bothered to wonder why it was happening. His conclusions were fascinating and led directly to his development of the SuperStereo concept and products.

The thinking behind SuperStereo

Why was interest in hi-fi declining? Because it was failing to hold the interest of the listening public. Although this failure became most apparent after the introduction of CD, it is unfair (and misleading) to lay the blame at the feet of the silver disc. Otherwise, a better CD would solve the problem – only it hasn't. Indeed, according to all the accepted measured data and the theoretical basis of reproduced sound on which it is based, CD got closer to audio perfection than any source before. Yet it still failed to satisfy musically, actually offering an inferior performance to the LP it was supposed to replace, a gap it's still striving to close even as it faces its own replacement. Standing back from the situation only one conclusion made sense. The scientific criteria being used to assess and guide audio



important quality of live propagation. So goes the argument (and Dynavector will supply a dense and comprehensive white paper to explain it far more fully).

I'm not going to attempt to assess the validity of this argument, but it does make some intuitive sense if we examine hi-fi history and experience. Just look at the sound derived from di-polar or omni-directional speakers, and the success they have in re-creating the live event. Is this entirely disconnected from the fact that they produce a more diffuse, dispersive sound field, allowing the listening environment to reintroduce an element of the original acoustic? Back in my days in retail I was always amazed by the number of customers who swore by their old and deeply unfashionable Bose 901s. But then they all had one thing in common: they were more interested in music than hi-fi.

The Dynavector DV ADP-2 SuperStereo Processor

Having developed the theory it's a long way from that point to a working product, and the ADP-2 under consideration here is the result of a long and tortuous development path involving both the necessary circuit and the system set-up. That first demonstration I witnessed was based on a costly integrated amplifier incorporating the SuperStereo circuit and finished in a rather fetching pale blue case with a curved chrome fascia. The four small speakers were arranged in a line beneath the hotel room's window, sitting on the floor. Despite the clearly audible benefits of the system it was easy to dismiss. After all, this was long before the days of integrated amplifiers from the likes of Krell had rearranged our sensibilities. Serious hi-fi needed lots of separate boxes and speakers needed serious stands, otherwise they couldn't possibly work. A jumped up integrated amp driving a pair of tiny speakers sat on the floor? Well, anything was going to

▶ development must be flawed. The closer we approached theoretical perfection the more obvious these flaws become in comparison to the original source.

The theoretical basis on which we measure (and hence develop) hi-fi equipment is the concept of transfer function. We compare what goes in to what comes out, and aim to make them identical. Fair enough. Unfortunately, the problem lies in the way we actually measure those two signals for purposes of comparison. This is based on the assessment of phase and frequency response using Fourier analysis. Unfortunately, one of the basic assumptions on which Fourier's work is based is that sound travels at a

constant velocity in non-dispersive media such as open air or an anechoic chamber. Whereas in reality, the environments in which the majority of (certainly acoustic) recordings are made are anything but, with a variety of differently reflective and dispersive surfaces causing significant group delay or 'shadows' in the sound. Importantly, these shadows travel at a different velocity to their original signal and with a variance in phase, a factor which Dynavector identify as a crucial element in the character of live sound. But when we pass a signal through a loudspeaker connected to a hi-fi system it will be restored to a state of homogenous velocity and phase, thus losing that

► improve on that!

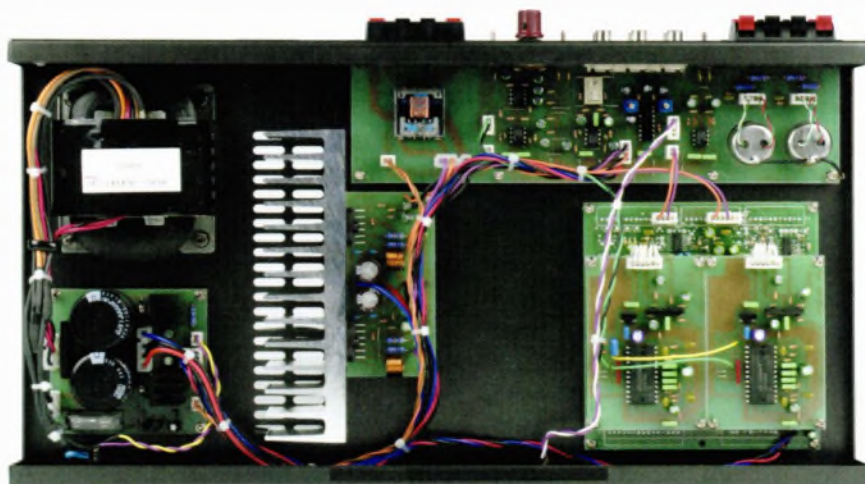
It's amazing how moral rectitude and self righteous certainty can transform without you even noticing, into blinkers bordering on tunnel vision. I was so blinded by the contrary nature of the set-up I managed to miss the obvious: this thing was working, and working really well. It's a lesson I've learnt since then, and now I never dismiss anything without listening to it properly, no matter how outlandish it might seem. In many ways, that system was way ahead of its time, testament to the clear-sighted vision of its designer. As to the floor placement for the front speakers, that's still where they were the last time Dr Tominari demonstrated SuperStereo to me. And you know what, they didn't sound that bad, although more on that later.

The current set-up is rather different. For starters, and as I described earlier, the ADP-2 is an add-on box containing everything necessary to convert a standard stereo system to SuperStereo operation. Secondly, speaker placement recommendations have also evolved. But first let's look at what you get for your money, and how much money we're talking about: The Dynavector, true to its heritage, is a slim, dark-blue chassis. The plain fascia is adorned by a power switch and a small overload LED and that's your lot. It's round the back that the interesting stuff happens. Three sets of spring terminal speaker connections create a cluttered appearance, but things are actually a lot simpler than they appear. Basically, the unit offers inputs at both speaker and line level, along with a switch to select between them. It also provides matching outputs in case you want to use the processor in the signal path. Other than that the fixtures are limited to the output terminals for the secondary (or sub) speakers, and the various controls that establish their operating conditions. These run to

a polarity switch, volume control and a mode switch that selects between classic and rock settings. None of which is exactly unfamiliar to anybody who has ever set up a subwoofer.

Inside the box you'll find a pair of 17 Watt solid-state amps and a digital delay circuit. But the really clever part, and what separates SuperStereo from other similar approaches is that the phase angle is altered in the analogue domain, and varied precisely with frequency. Although Dynavector are tight lipped on the subject I get the distinct impression

micro system he can find. To this he hooks up the ADP-2 and a small pair of Teac or similar speakers. The transformation wrought is incredible, and this is an important part of the processor's design brief. It isn't just for high-end audio use, but should be capable of delivering real musical pleasure in even the most basic and disadvantageous circumstances. After all, if listening to music in the home is to recover its importance in the overall scheme of things, these are the people we must convince. It's an ambitious



that the precise degree of phase shift applied, and the frequencies chosen are both critical and what took so long to develop.

When it comes to hooking-up the SuperStereo processor to a system, the main thing that you need to know is that it doesn't alter the signal being passed to the main speakers in any way, despite the suggestion of the various outputs on the rear panel. That means that you can simply run it from a parallel line output on your pre-amp or integrated (not a tape out!). In this arrangement the input switch becomes a by-pass, which is also handy. So why provide all those input and output options? They are there to make the unit genuinely universal.

Dr T's favourite demonstration involves using the cheapest, one box

agenda, but it was also the starting point for the technology, so it would be perverse to abandon it now. Which is why the terminals are spring-clips and you have the facility to connect the unit in line with your main speakers. Not too many micro systems have pre-out socketry!

Which will lead many of you to question whether the ADP-2 has any place in a serious hi-fi set-up. Well, just consider this: the fundamental flaw that effects our approach to musical reproduction is universal. More expensive systems might be more capable of overcoming it than cheaper ones, but a house built on sand is still a house built on sand, no matter how much care goes into the walls and roof. But for those of you who find ►

▶ the notion of spring-clips and 17 Watt solid-state amplification too big a conceptual leap, there is a more expensive version, the SSP-5, with proper sockets, no internal amps, six channels and a £2450 price tag, just to restore your audiophile credibility.

I've been playing with the ADP-2 for quite a while, so it's seen action in plenty of different system contexts, but the review I relied on a couple of set-ups dedicated to its use. The primary listening was carried out using the Hovland amplifiers and cabling driving the Audioplan Kontrast IIII speakers, with the ADP-2 connected to the second set of pre-amp outputs and driving a pair of the original 'tin-box and Nextel' B&W LMIs. I ran the ADP-2 on long leads so that I could place it in front of the listening position, making adjustments particularly easy. I've always had my doubts about mixing and matching speakers, doubts born out in experiments with 5.1 systems. To that end I also used a second system based around the NHT 2.9s driven by Michell Alecto monoblocks, with an Alecto Stereo fed from the Processor line output driving a pair of the NHT 1.5s for the effects speakers. Once again, using a coherent package of speakers and amplification proved its worth in terms of overall musical coherence, and the ADP-2 certainly helped the NHT's comparatively weak imaging and compact soundstage. However, with careful set-up the Audioplan/B&W combination benefited from the superiority of its main amplifier and speakers. Ultimately, it was this option that I relied on (partly because it more nearly reflects real life scenarios) but I intend to pursue this question further.

Making music... The ADP-2 in practice

Given that SuperStereo grew out of one man's dissatisfaction with the performance of classical CDs that seems like as good a place as any to start. Let's

use the Murray Perahia recording of the Bach *Keyboard Concertos Nos 1, 2 and 4* (ASMF Sony SK-89245) as an example. Reviewed very favourably by JMH in the last issue, this is an excellent example of the standards achieved by the better mainstream classical releases these days: Perahia's flawless performance is matched by excellent orchestral balance and reasonable tonal warmth that is blessedly free of digital screech. It makes for highly enjoyable and engaging listening. But plug in the ADP-2 processor and the whole experience is dramatically lifted, with a huge increase in scale, authority, instrumental weight and warmth and overall space. In fact, the volume control on the Dynavector acts almost as a 'bloom' button. Turn it up from zero and you'll hear the soundstage swell in front of you, gaining width, height and whole layers of depth. So much so that it's easy to get carried away with the spatial cosmetics and miss what's really happening. Inside that soundstage instrumental weight, tonality and separation have all improved, making it far easier to hear into the performance. The extra weight and space the ADP-2 brings to events adds also to the rooted sense of solidity in the music, planting the instruments and grounding their dynamic envelope, making the performance crisper, more emphatic and far more dramatic. Rhythmically speaking, it sounds far more together with a much greater sense of ensemble playing. In fact, aside from the visually intrusive extra speakers (bear in mind that my listening room isn't dedicated to the arrangement) I can see no downside whatsoever.

Given the processor's performance on smaller scale and more articulate pieces, it seems only sensible to reach for something entirely over the top: the Reference Recordings disc of Rachmaninoff's *Symphonic Dances* with Eiji Oue and the Minnesota Orchestra (RR-96CD). Now this HDCD recording isn't exactly short on separation, soundstage dimensionality, weight or

dynamics. As CDs go it's something of a sonic tour de force. Yet the addition of the ADP-2 still wrought a fairly dramatic improvement, particularly in terms of focus and transparency and the all-important sense of musical momentum. With the Dynavector in use it was far easier to separate the contribution of the individual instruments, especially the piano, while the shape of the orchestra and the musical shape of the big crescendos was far more apparent and coherent. The added sense of air and presence really brought this recording to life.

But interestingly, I've fastened on discs that are good already. Play some of the more mediocre offerings out there and the results are even more dramatic, salvaging musically important performances from the shackles of poor recordings. In many respects this is where SuperStereo's real value lies, just as its inventor intended. It helps explain the eclectic presentation chosen for what is after all a far from cheap unit, and justifies the decision to make it genuinely universal.

Which brings us at last, to the acid test. SuperStereo might have been provoked by the inadequacies of CD, but the critique is applicable to all hi-fi systems, whatever the source. How would the processor cope with a decent record? Turning to that old chestnut, *Tea For The Tillerman* (Island 842 352-1) let's see what it does. Played on the Kuzma Stabi Reference, JMW 12.5, Koetsu Red K Signature, the signal was fed through the Phonomena phono stage complete with battery supply. Once again this was a combination chosen for its open, warm and weighty sound so as not to play into the Dynavector's hands: once again the ADP-2 rose to the challenge.

This is a pretty impressive disc even on a modest system. Play it on something good and it's one to impress your friends with. You know, the ones who claim not to be able to hear differences. Throw SuperStereo ▶

▶ into the equation and you wind up with something truly spectacular. The extra depth, separation and dimensionality are obvious enough. With them comes a natural smoothness and progression in the playing, a removable of intrusive edges and strain without any loss of detail or dynamics. The sound is simply cleaner and less constrained. You can't hear it butting up against the edges of the system's performance envelope anymore. The means of production no longer intrude, the performance addresses you more immediately and holds your attention in a tighter grip.

These are just a selection of specific examples but the results are remarkably consistent, raising the satisfaction level of all types of music and all sources. Of course, I haven't compared the benefits of the ADP-2 to a 5.1 system with 5.1 encoded material. That is something which I will get to, and which PM touches on in his follow-up to this piece.

I started out looking for a sensible alternative for those dedicated stereo listeners wanting (or being badgered into) adding a surround element to their systems without destroying their two channel performance. I've ended up with much more than I bargained for. Sure, adding an ADP-2 and a nice, compact LCD projector to an existing two-channel set-up will indeed deliver big pictures and big sound to match. What I wasn't ready for was the conclusion that the ADP-2 might become a permanent part of proceedings. It actually makes it an even better solution, and even better value for money. The Dynavector SuperStereo processors might be hard to find but it's well worth going out of your way to hear one. I think you'll be just as pleased, bemused and beguiled as I was when I first really listened. Meanwhile, I've got my sights set firmly on an SSP-5. You'll be hearing more, much more on this subject. Count on it.

TECHNICAL SPECIFICATIONS

Type:	SuperStereo Processor
Inputs:	1 x Line level 1 x Speaker level
Input Impedance:	50 kOhms (line level) 300 Ohms (speaker level)
Outputs:	Main speaker Sub speakers Processor Out (4.0 V)
Power output:	17 Watts / 4 Ohms 15 Watts / 8 Ohms
Dimensions (WxDxH):	430 x 63 x 230mm
Weight:	3.5 kg
Price:	£800

UK Distributor:

Dynavector (UK) Ltd.
Tel. (44)(0)1202-767873
Email. dynavector@onetel.net.uk
Net. <http://web.onetel.net.uk/~dynavector>

Manufacturer:

Dynavector Systems Ltd
Net. www.NetLaputa.ne.jp/~dynavec/

Dynavector Part 2

But what about movies...

by Paul Messenger

My recent column (Hi-Fi+ No16) looked in some detail at how our surround sound systems have evolved, from the analogue quadraphonics (and Hafler) of the 1970s to today's new discrete multi-channel formats. And although I'm using the verb

'evolved' to describe the changes that have taken place, I'm far from convinced that evolution and progress go hand in hand here.

I'll go along with the contention that discrete multi-channel sound makes sense for movie soundtracks,

which have been created in surround sound for many years. However, the case for multi-channel music is creatively much weaker (do we need it?), and because it's all tangled up in format competition and confusion, I believe regular two-channel stereo ▶

▶ will remain the prime music source for the foreseeable future. (Which is maybe a shame, since surround sound does have its benefits!)

Today's hi-fi enthusiast might be into music, or movies, or both, though I reckon the vast majority of Hi-Fi+ readers will prioritise stereo music. Assuming therefore that movies and the surround dimension are not the main consideration, it makes sense to put together a system where the serious quality component core is stereophonic, while the surround bits are secondary.

a variation on the original Dolby Surround theme, from the pre-Pro-Logic era of domestic movie viewing. It has the twin advantages of avoiding introducing any compromise whatsoever to the basic stereo system, while supplying the 'room cancelling' bonus that, to these ears at least, is probably the biggest bonus of any surround sound system.

I've tried literally hundreds of speakers down the years, and come to appreciate the way variations in the directivity patterns of different designs are reflected in the final acoustic illusion. A speaker with narrow radiation (like a panel/dipole) naturally creates far fewer

on the stereo imaging precision and focus of the front speaker pair, but the extra surround ambience helps avoid the slightly claustrophobic effect generated by just two speakers, and also seems to generate a much more spacious all round acoustic environment than the room in which you're actually living.

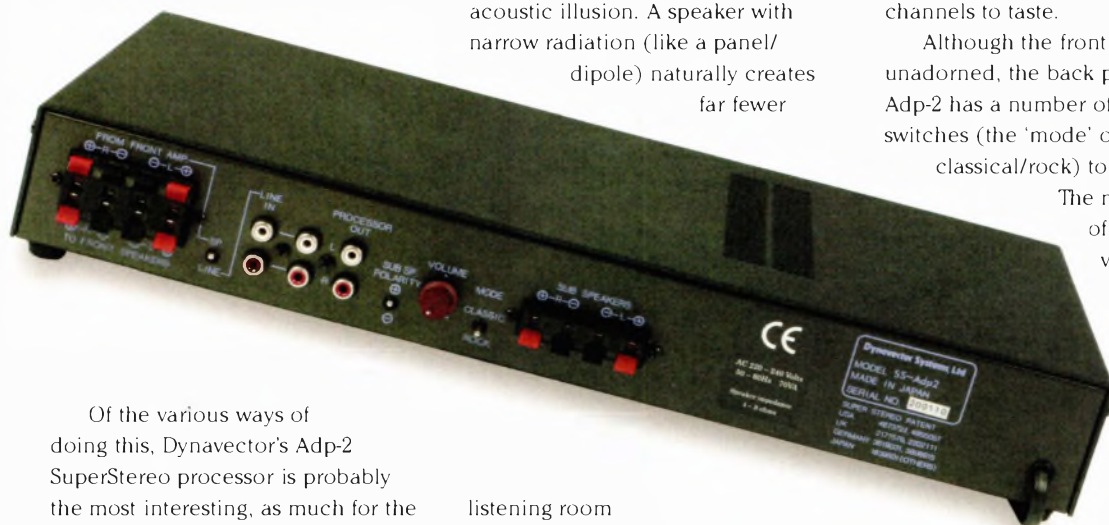
The end result therefore not only retains imaging precision, but also has significantly greater all round spaciousness than any omni-directional design, with the added bonus that you can adjust the relative volume of the surround channels to taste.

Although the front is plain and unadorned, the back panel of the Adp-2 has a number of knobs and switches (the 'mode' one labelled classical/rock) to play with.

The most important of these is the volume knob, and my minor regret is that there's no means of adjusting this remotely. For general day-to-day listening

I like to keep the surround volume below the level of obvious audibility, but also like to turn it up a little if playing a movie, and I'd really like to be able to make fine level adjustments from the listening seat.

Obviously this processor is primarily oriented towards music replay, but I still found it pretty satisfactory when replaying movie material. Naturally, localisation is a little weak, but the sense of atmosphere and tension was always very entertaining, and that is the bit that really matters when it comes to generating excitement and involvement.



Of the various ways of doing this, Dynavector's Adp-2 SuperStereo processor is probably the most interesting, as much for the way it's intended to improve on what the company claims are inherent limitations in regular two-channel stereo, as for any particular ability with movie soundtracks.

I can't say for sure whether it's a substantial improvement over some of the less expensive solutions I outlined in that column, but can unequivocally state that it works very well in absolute terms, doing pretty much what's stated on the packet with regular stereo music, and well as giving enjoyable results with stereo movies too.

You won't get all the spatial precision of a full 5.1 approach to movie reproduction of course. In many ways the Adp-2 resembles

listening room reflections than an omni-directional design that sprays the sound around in every direction. Simplistically, the former provides the more accurate and precise 'window' onto the actual environment of the recording (only bettered by headphones), whereas the latter gives a better impression of bringing the musicians into your listening room.

Adding an outboard processor like the Adp-2 (especially alongside a 'narrow' radiating front speaker pair, such as those Tannoy TD12s I reviewed a couple of issues back), somehow manages to provide something approximating the best of both worlds. With the processor active you still seem able to hang



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Wadia 301 CD Player

by Chris Binns

I must be getting old. I had been talking to a group of the students that I take for sound engineering about the differences in mastering for CD as opposed to vinyl, and it suddenly struck me that most of them were born after compact disc was introduced. It is almost twenty years since it made its debut to the general public, but the irony of it is that a large proportion of the students have a good collection of records (and I'm not talking 12" singles) and think that CD's suck; hey, that's the rebellious youth for you. But there is nothing like the seeds of doubt being sown during the prime of a technology to push things along a bit, no where more apparent than with high end hi-fi. I don't think that anyone could deny that there have been some fairly major advances in analogue reproduction from LP's since the death knoll was rung for vinyl as the dominant market medium for music reproduction. The other advantage of a technology consigned to the 'retro bin' is that it takes on a degree of stability – there is little chance that someone is going to produce an LP that runs at 41.5 RPM...

So with SACD and DVD promising to be the future bearers of higher definition digital sound, it is perhaps only now that the promises made for the original 16 bit 44.1 kHz format are being realised. That's assuming that we've quietly forgotten about the 'perfect sound forever' monologue. CD reproduction continues to improve in leaps and bounds; but with the threat of change hanging over CD technology, and a degree of uncertainty creeping in to the buyers market I would think that many people would

be reticent to spend vast amounts of money on a high end CD player.

So how do the people at Wadia sleep at night? Investing heavily in digital technology these days is a risky business; things change so quickly. Here is a company that specialise in the design and manufacture of

equipment that could be said



to define the high end of audio CD technology – the 270 transport and 27ix decoding computer will set you back a cool £18000.

It is understandable then, that the name Wadia inspires either a degree of reverence (because you have heard one, or indeed even own one) or an 'eyes heavenward' look accompanied by a shaking of the head as if to say you must be mad... which probably means that you have not heard one.

The company was founded thirteen years ago by a group of telecommunication engineers who were committed to using advanced digital technology to improve the performance of digital audio, and as such, their products have established

themselves as state of the art, with a price tag to match. But they have been careful to design their products in such a way as to be able to incorporate future technology as and when it appears, something of a reassurance to a potential purchaser in these troubled times. And if anyone has their finger on the pulse of new developments in digital audio, I guess that Wadia are pretty much near the top of the list.

My first significant encounter with a Wadia product was with the 861 that RG reviewed last year, having spent a bit of time listening to it I can say that this was the first time that I had been really musically convinced by a CD player. It somehow managed to transcend what I had come to expect from the medium, sounding particularly natural and involving. But it is still £8500.

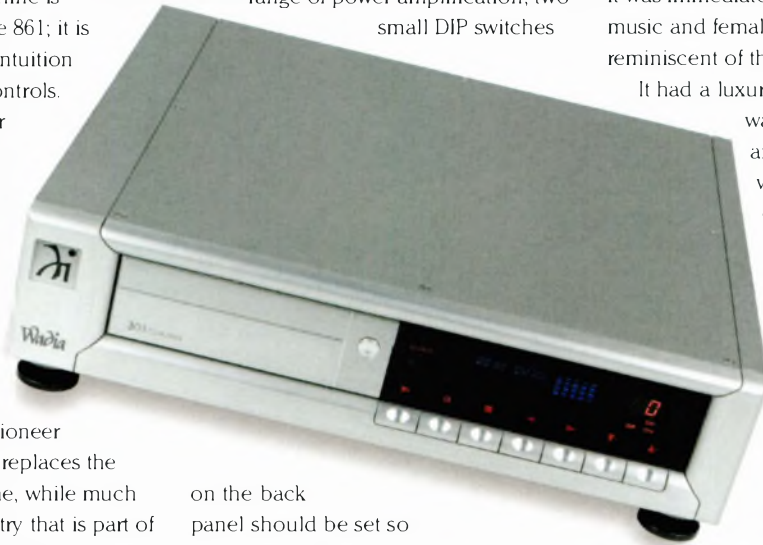
For Wadia, the 301 represents their newest shot into more affordable territory (there used to be an 830), and it incorporates much of the philosophy and technology conceived with the flagship models. It would seem as if the process has been a considered exercise in retaining as much of the performance of the 861 as possible. So although the heavily compartmented case of the larger models has been replaced with aluminium section that bolts together to form a rigid non resonant shell, it is still impressively solid, and I gather that the investment in this will pay off in the form of other 3 series products. Aesthetically, the 301 looks functional, if a little utilitarian, and a lot heavier than it actually is. It is also quite

▶ deep which might present a bit of a problem when it comes to supports and suitable positioning, none of the platforms I had to hand would accommodate it safely. Front panel controls are straightforward enough, while the blue display is not that easy to read from a distance, with the exception of the red volume readout. The remote that came with the machine is actually designed for the 861; it is solid enough but lacks intuition with the layout of the controls. There are also a number of functions that do not respond with the 301, such as the ability to turn off the display. The operating range is adequate, but I would like a greater acceptance angle for it to be really effective.

A variation on the Pioneer 'stable platter' transport replaces the more expensive Teac one, while much of the proprietary circuitry that is part of the Wadia heritage has remained. I would guess that the most significant of these are the 'Digimaster' re-sampling filter system, the unique clocking system, and a digital volume control. What about the digital volume control? First and foremost, it offers the possibility of direct connection to power amplifiers, negating the need for a pre-amp. Apart from the benefit of one less piece of equipment in the signal path, it also removes a set of (presumably expensive) signal leads. While there are a few CD players that offer an analogue volume control facility, there are even less that I can think of that provide a digital option and thus remove the necessity of a potentiometer, a contentious electronic component at the best of times.

But controlling volume digitally is not without its problems. The only way level reduction can be achieved is by removing digital information; in practice this translates to a thinning of the

resolution at the rate of 1 bit per 6dB of attenuation. In other words, as you turn down the volume there is a corresponding reduction in the number of available digits to convert back into music, with a consequential reduction in quality. This is one of the reasons why the 301 has a selectable output level to accommodate a wide range of power amplification, two small DIP switches



on the back panel should be set so that your maximum listening level corresponds to 99 on the front panel display, i.e. flat out. Brilliant. So next time the neighbours are complaining, you no longer have to lie about your system sounding better at high volumes. Seriously though, it could be said that the use of a digital volume control is merely swapping one set of compromises for another, and I was curious to find out how it would perform in practice. Wadia are so confident of the benefits that they offer optional digital inputs and switching so that you can use the 301 (and its DAC) as a control centre.

I had been warned about giving Wadia plenty of time to warm up by both the importers and the editor – his experience with the 861 was that it suddenly changed quite dramatically after a few days of use. So I left the 301

running on repeat and waited for well over a week, just to be on the safe side.

After being so patient, I suppose I was expecting to be blown away by CD performance hitherto unheard of in my living room; in truth the 301 was mildly disappointing to listen to with the first few discs I played. Gentle, easy on the ear and oh so polite in its presentation, it was immediately at home with string music and female voices, a little reminiscent of the 24 bit Meridian 508.

It had a luxurious presentation that was highly seductive, and a soundstage that was, where required, expansive and for want of a better description, big. But the 301 did not just produce a wall of sound, as there was good depth to the image with both focus and precision, solo instruments were portrayed with a solidity and confidence that to date I have not usually associated with CD.

Unfortunately, this laid back quality also extended to the bass end, where the Wadia lacked a sense of drive and precision, making a lot of music sound limp while failing to communicate the rhythmic urgency that some more up tempo music required. Vibrant, full of energy performances were all sounding

a bit mushy, rather like an old but comfortable sofa that you sink into and promptly fall asleep. Nice as this was, I was concerned that there should be more to cutting edge digital reproduction than a cure for insomnia. The 301 so far had been sitting on a lightweight support that bypassed its integral feet. Sitting it on a relatively ▶



► heavy platform redressed the balance quite considerably, and endowed the bass with more attack and bite, which had the overall effect of making the whole presentation sharper with much better timing and focus.

So far I had been using the 301 as I would any other CD player, with the remote volume set at maximum and plugged into my pre-amplifier. This is hardly what Wadia would have intended; why else would they go to the trouble of engineering a digital volume control? Feeding the power amps directly from the 301 proved to be something of a revelation; it suddenly sounded grown up. Bass performance snapped into line, becoming taut, fast and exciting, while everything else seemed to gain better definition and speed, the music was closer and far more challenging as a result. Here was one of those transformations that had me grinning from ear to ear, and made me want to explore the outer limits of my CD collection, resulting in a few very late nights of intensive listening. The 301 highlighted to me that wide audio bandwidth doesn't necessarily have to mean letting go of good rhythm and timing a compromise that seems to overshadow many CD players (and indeed a lot of audio equipment), where the ultimate bass extension is curtailed to provide an illusion of a dynamic bottom end. The 301 doesn't need to play such games, sounding as it does unprocessed and very much full range - believe me I would know if it wasn't, as I am still using the Revel Salon loudspeakers in my system. The only area where I felt that the Wadia was not totally convincing was with its portrayal of tonal colour in the bass, sometimes cellos sounded a little bit as if they were made of cardboard, robbing the music of some expression. If this was the case, it's a small price to pay for an otherwise thoroughly enjoyable performance.

The combination of wide bandwidth, dynamics and a soundstage that could envelop you with its intimacy proved to be very involving and, dare I say it an almost analogue experience, regardless of the type of music being played.

Using the volume control proved to be something of a dichotomy. Paranoia would set in with the thought of all

those lost digits when not listening at full



volume, forgetting of course about the compromises that a normal analogue component introduces when not running flat out. The difference in level between a recording of say a string quartet and a full on punk band are vast; to begin with I found myself often altering the switches on the back in an attempt to keep the volume as near to 99 as I could. But after a while the mind games subsided, and I have to be honest and say that despite some critical listening at very low volume levels I could not entirely make up my mind as to how much degradation of the sound was actually occurring. I'm sure that there is a degree of psycho-acoustics involved as well.

But the one aspect of using the 301 as it was intended was that it made the playback of another analogue source such as vinyl, somewhat inconvenient. I'm sure that the Wadia approach would be to convert the turntable source to digital; something that I am not prepared to do. This makes practical

use of the 301 in my system awkward, as my listening sessions tend to dart between vinyl and CD in a pretty unpredictable fashion, and the idea of messing around unplugging cables is tedious to say the least.

But I'm sure I could find a way around the problem if I really had to.

The fact that I have been thinking about this particular inconvenience quite a bit strongly reflects the results that I was getting with the 301. Quite simply it sounded more natural and far less mechanical than other machines that I have tried in my system, and now that it is gone, I miss it. With this machine Wadia have succeeded in capturing elements of performance from their more expensive players to good effect. The result is a player that has a confidence and authority about its performance that many other more expensive players miss out on. They are too busy giving you more refined CD, while the Wadia seems to give you more music. Call me a convert. I don't suppose its available in black? ➤

TECHNICAL SPECIFICATIONS

Pick up mechanism:	Pioneer stable platter
Output voltage:	0.3 - 4.25 Volts, adjustable
Analogue outputs:	Balanced XLR and RCA single ended
Digital output:	1 S/PDIF
Dimensions (WxHxD):	430 x 370 x 120
Weight:	18 lbs
Finish:	Silver
Price:	£3650

UK Distributor:

Musical Design Co.
Tel. (44)(0) 1992 573030
Net. www.mdc-hifi.co.uk

Manufacturer:

Wadia
Net. www.wadia.com



Reference Audio Axis Loudspeaker

by Roy Gregory

How often have you heard someone say, normally at a hi-fi show, "How much? I could make that myself for a fraction of the price." The comment is then generally followed by a conveniently vague master plan as to how the product could be substantially improved (and a rapid exit stage left, pursued by a bear, or in this case an incensed exhibitor). Which is where things normally remain until the same characters play out the same scene at the same time the next year.

Reference Audio is a combined venture between two long-time home speaker builders who felt exactly the way I've just described. Unlike the majority of their compatriots they've been prepared to put their money where their mouths are, confident that they could do it better themselves. Well, manufacturing is a steep learning curve and reality bites hard and right in the wallet. Making speakers as a product rather than a hobby is an entirely different proposition. Suddenly the costs start to mount (packaging, premises, administration, guarantees, marketing, labour – and that's all before a dealer wants a margin) and before long your sub \$2000 project is costing the customer closer to three grand, which also moves it a lot closer to the market norm. At which point a lot of people would take one look at the products delivered by the big boys and call it a day: But not our intrepid adventurers. Enthusiasm tempered but undimmed, they have forged ahead, confident in

their abilities and the products they've created (there's a stand mount come centre channel as well). Look a little closer at the Axis and you can begin to understand why, because there's a lot more here than meets the eye.

What at first appears to be a pretty standard D'Appollito floorstander, like any number of others on the market,



contains a few wrinkles of its own.

The attractively slim and deep cabinet dimensions conceal separate chambers for the two bass units, each with separate loading. The upper driver operates in a sealed box whilst the lower one is terminated by a quarter wave line. The drivers themselves are sourced from Morel for the bass-mid drivers and SEAS for the tweeter. Of course, the extra carpentry helps to further stiffen what is already a fairly substantial cabinet, built as it is from 20mm MDF throughout. Even less obvious (unless you're prepared to go by the quality of the WBT bi-wire terminals fitted) is the construction of the crossover. Entirely hard-wired with real loudspeaker cable, it features selected audiophile components, including my favourite Hovland caps.



Nor is the base plate that increases the speaker's footprint the standard sheet of screwed on MDF. This is a welded and braced steel component manufactured for Reference Audio by Partington. The spikes are positioned in the extreme corners, maximising stability, and can be easily adjusted from above, using the socket heads in the M8 threads. The base plate is attached to the speaker using four M8 allen bolts, making for a really solid junction. The spikes themselves are Michell cones, and the threads are locked using nicely turned aluminium top caps. Taking a leaf out of the competition's book, the cones and all the allen keys necessary to assemble the speaker arrive in a foam-lined case. While you're putting the whole lot together you'll also notice that the underside of the base-plate is damped with a resin compound. It, like many of this speaker's finer points, spends most of its time hidden from view.

Talking of hiding things from view, the thin grilles are a welcome change, fixed in place with four more allen bolts.

However, I'd have liked to have seen chamfered edges on the insides to reduce their sonic impact, making them as musically unobtrusive as they are visually discrete. And while I'm moaning, the threads on the cones could have been longer, allowing for a greater range of adjustment. But these quibbles aside I have to say that this is a remarkably complete, well thought out and well presented product for such a young company. The veneer in particular is beautifully selected



▶ and applied, adding significantly to the attractive overall appearance. Asked what separates them from the herd, Reference Audio would point to the quality of their components and the care and attention to detail. They are justifiable claims.

Electrically speaking, the Axis presents a less than fashionable load. Efficiency is around the 88dB mark, while the impedance drops to 4 Ohms. It's a combination that suggests that they'll be most at home with reasonably stiff solid state amplification. The likes of Naim spring to mind, while the company was making an excellent sound at the recent Heathrow Hi-Fi Show using the cheaper (but still ruinously expensive) Boulder amplification. In practice the Hovland Sapphire worked beautifully on its 4 Ohm tap, while more modest options included the trusty Densen Beat and Hegel H1 integrated amplifiers, the latter, at £1500 a particularly impressive and cost effective match.

Positioning wise, the Axes gave of their best around 18 inches out from the rear wall and with a very slight toe-in. I also took care to level them properly, a task made considerably easier than normal by the excellent spiking arrangement.

Right from the first listening session (which was only really intended as a warm-up) it was clear that the Reference Audio speakers thrive on an amplifier with real authority. Soft amps sound soft where what these speakers want is something to get hold of them and kick them around. It's not that they're particularly awkward to drive.

Rather that they respond to a firm hold on the reins. That's partly down to their bass response, and human nature being what it is, that was also my first port of investigative call. Whenever anybody brings me a speaker with some weird, new or different bass loading I always approach it with a degree of suspicion. Show me one with composite loading and the first thing I question is the

evenness of its response. Show me a quarter wave and I'll immediately start looking for time-lag

Out came *This One's For Blanton* (Analogue Productions CAPJ 015), one of my standard set-up discs.

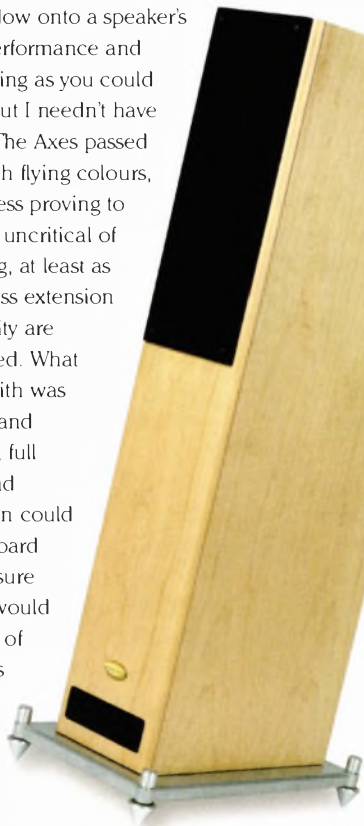
The extended runs of Ray Brown's bass, accompanied only by Duke Ellington's sparse piano, are as critical a window onto a speaker's bass performance and positioning as you could ask for. But I needn't have worried. The Axes passed the test with flying colours, in the process proving to be relatively uncritical of positioning, at least as far as bass extension and clarity are concerned. What

I was rewarded with was deep, even, fluid and tactile bass notes, full of pace, attack and texture. Ray Brown could traverse his fret board with confidence sure that the speaker would track his changes of pace and pitch as well as telling us the shape of the notes he was playing.

It's a remarkably confident and impressive performance from one so slight. The speaker that is!

Now, as I said, I tend to look on complexity with a fairly jaundiced eye, but in this instance Reference Audio certainly seem to have succeeded in making it work for them. The solidly constructed cabinet, braced by its internal baffles certainly seems resistant to stored energy, and the slurred time signatures that go with it. Likewise, it's refreshingly clear of the MDF thud that afflicts the bottom end of so many speakers. What makes it demanding on the amplifier is more the extension available and the impedance characteristics of the transmission line. Any low-frequency or power supply deficiencies are ruthlessly revealed. It's not a question of amplifier quantity, but rather of quality. Good, solid engineering is what's required, combined with decent agility.

Like I said, Naim springs to mind, but there are plenty of alternatives, and I'd love to hear these speakers with the Lavardin IT. Of course, if you get the bottom-end right then it certainly helps everything else to fall into place. The Axes' bass performance might be impressive, but it's all the more so for its balance to and integration with the rest of the range. Using such small drivers ought to deliver benefits across the mid-band and in terms of treble integration, and once again Reference Audio deliver on that promise. Whether it's Ellington's piano or Murray ▶



► Perahia's, the sweep of the keyboard is undisturbed by unsightly jumps or discontinuities. Tonally, the music is all of a piece; structurally it hangs together impeccably. The complex figures of Bach's *Keyboard Concerto No2* are beautifully unravelled and just as convincing as the guitar driven rock of Stewboss.

Where the Reference Audio speakers are less impressive is in the range of colour they provide, and the extent of their soundstage. They paint from a slightly restricted palette and at the same time they lack the absolute transparency of a speaker like the Reference 3A De Capo or Audioplan Kontrast III. What you get instead is musical presence and integrity in spades. Ferras' Tchaikovsky *Violin Concerto* lacks the spatial clarity and focus that comes from the Kontrast's although it's hard to fault the sense of musical purpose. Individual instrumental choirs, whilst separated aren't as finally delineated and there's a cohesive quality to the air and space of the soundstage. It's certainly not intrusive, and unless you'd heard the record replayed on a system that handles this aspect of performance much better, you might miss it altogether. However, it is there on the record and I've been unable to coax it forth from the Axes.

I'm well aware that such arcane issues are considered irrelevant by a large proportion of the listening public (along with the Tchaikovsky *Violin Concerto*, but that's another matter) so you pay your money and

takes your choice. If you want holographic imaging then you'll probably be happier looking elsewhere: If you want musical involvement and real presence then these could be just the ticket. And if

I sound slightly disappointed then it's only because the rest of the speaker's attributes are so impressive. And they are. Even an old favourite like The Cure's *Seventeen Seconds* comes up lively and new. The transition from the ponderous atmospherics of 'A Reflection' to the driven beat and insistent bass of 'Play For Today' passes without a missed step, the change in pace and energy accommodated with ease. The jangley splash of Robert Smith's guitar cuts and slashes at the melody and the unmistakable vocals are clear and distinct, down to Smith's 'behind the beat' slurring of notes and bars. Any slowing or lag in the bass and this album just falls apart. The Axes kept it moving nicely, the solid drum sound propelling the music just the way it should. It's

a performance that majors on substance and meaning, motive and purpose. It suits The Cure down to the ground. It also suits the *Goldberg Variations*, which is really the point. Don't get the idea that this is a rock speaker or anything like that. Musically speaking it's tremendously even-handed. The issue is rather whether or not you

value its structural strengths ahead of its minor cosmetic failings. Personally I suspect it's going to find a home in systems where people want the sort of drive and rhythmic integrity that flat earth set-ups provide without the total disregard for imaging and tonal accuracy that so often accompanies them.

Anybody looking for a speaker that injects the life, energy and bounce back into recordings should certainly seek out the Reference Audio Axis. What sins it has are minor, and being of omission they're also unobtrusive. Its strengths are persuasive and substantial. It also looks extremely nice. But the thing it does best of all is make listening to music fun, and you can't argue with that. It's a mightily impressive first product from a company that deserves to succeed. ➤



TECHNICAL SPECIFICATIONS

Type:	Two-way floorstander
Drive Units:	25mm soft-dome tweeter 2x 125mm DPC synthetic coned bass units
Bass Loading:	Composite (sealed box and quarter wave line)
Bandwidth:	-3dB at 35Hz
Efficiency:	88dB
Impedance:	4-6 Ohms
Dimensions (WxHxD):	180x1025x350mm
Footprint (WxD):	265 x 415mm
Finishes:	Maple, Cherry and Walnut
Price:	£2800

Manufacturer:

The Loudspeaker Manufacturing Co. Ltd.
Tel. (44)(0)1474 854208
Fax. (44)(0)1474 854902
E-mail. sales@referenceaudio.co.uk

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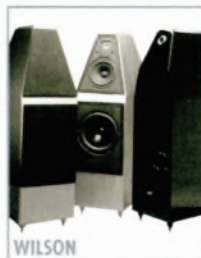
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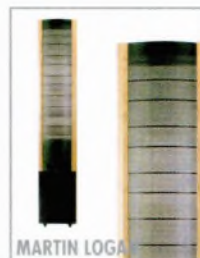
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Roy Gregory

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Roy Gregory

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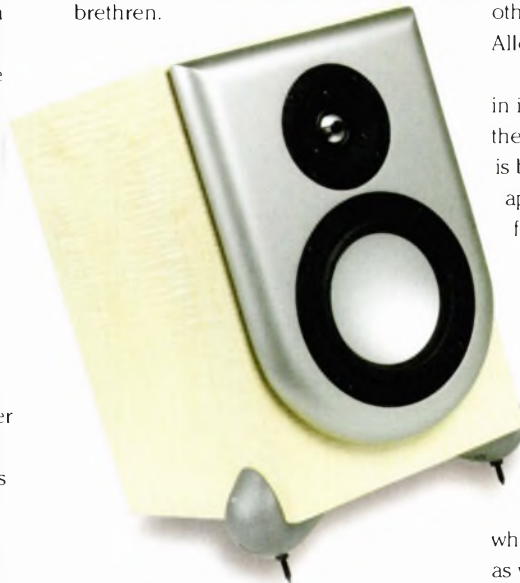
by Roy Gregory

Revel speakers have a long and illustrious relationship with Hi-Fi+. The stand mounted Ultima Gem was reviewed by CT (who bought a pair). The Ultima Studio by myself as part of the Mark Levinson reference system (where they managed to keep pace with the extraordinary performance of the electronics), and the flagship Salon by CB (who would have bought a pair if he could). It's fair to say that we've been universally impressed. And so we should be, for these are expensive products, at least in pure monetary terms. Compared to the competition they look like absolute bargains. It's nice to see a whole range of upmarket products that really deliver in musical terms as well as material ones, and whilst expensive products should deliver the sonic goods, it's remarkable how many don't.

The question is, can Revel pull off the same trick with their budget Performa range? So, having last looked at the top of the line Salon in Issue 17, it seemed somehow appropriate to switch our attention to the companies' cheapest product, the Performa M20 stand mounted two-way.

Now, expensive stand mounts are hardly the most fashionable of speakers, and despite its cheapest in range status, the M20 is still an expensive speaker, at least in a European context. Add its 87dB efficiency into the equation and it stands in such stark contrast to the 90dB+ floorstanders that provide the price point competition as to

be almost perverse. Why, after all, should anybody bother? Well, there are reasons, let me assure you, and not surprisingly most of them relate to the M20s' more expensive brethren.



The classic 6.5" two-way configuration displays some interesting wrinkles. Both drivers are designed and built by Revel and use aluminium diaphragms designed to provide true pistonic motion. The bass-mid unit is driven by a one and a half inch diameter, edge-wound voice coil, vented for even better power-handling: Sensible given the speaker's bandwidth and moderate efficiency. The tweeter uses an underhung voice-coil and again, it's ferrofluid damped for better power handling. Mechanical integrity is ensured by the bass driver's substantial, die-cast chassis and the use of Allen bolts to fix both drivers. Incidentally,

following the running-in period, all these could take at least a quarter turn of tightening, with the usual sonic benefits. It's well worth checking this before auditioning the M20s (or any other speaker) but you'll need a 3/32" Allen key to do it.

The squat cabinet, almost dumpy in its dimensions is rather larger than the norm for this type of speaker, and is built from braced 25mm MDF. The appearance is softened by the curved flying baffle that supports the drivers, providing a low diffraction surround as well as a double thickness front plate. Matching hook-on grilles are available as an optional extra, while the quality of the veneer on the review pair was excellent. Round the back you'll find more surprises, first of which is the single set of binding posts. On the whole, I rate that a good call by Revel, as with the equipment and cables likely to be partnering the M20s, I reckon you'll get a better result from a single run of decent cable than two runs at half the price. What you also get is a pair of rotary pots that allow you to switch the bottom end alignment to suit either freespace or wall proximity/bookshelf mounting, and vary the tweeter output in 0.5dB steps by up to a dB either way. Finally, there's the large diameter and beautifully flared reflex port, positioned immediately behind the tweeter.

In fact, the most surprising thing about the M20 is just how much of the materials and technology of the more expensive models it retains. ►

▶ The drivers are the most obvious example, but the crossover components, internal wiring and external hardware are all of excellent quality. More importantly, just as much thought and consideration has gone into the design and ingredients of the baby as has been applied to the flagship model. Where the corners have been cut is in the less exotic cut of the cabinet, dispensing with the double side panels and some of the more exotic finish options. Sure, the number, size and absolute quality of the drivers is reduced, as are some of the components, but the cost cuts have been very carefully judged, so that compared to its price peers the little M20 enjoys the same technological superiority as the Ultima series.

Of course, this wouldn't be a Revel without the aesthetic individuality that sets the marque apart. Pull the M20 out of its box and you discover that it comes with three little blobby feet, toned with the baffle. Cast from aluminium, they are attached by bolts to ferrules set in the base of the speaker. They arrive with nylon skates attached, which can be replaced with 6mm spikes. If you choose to use the speakers on stands then these feet transfer to the T base of the dedicated, three leg design, a tall, 28" flat packed structure. The speaker bolts to the top-plate via three more ferrules in its base, and typical of the attention to detail lavished on the complete package is the availability of alternative, shorter posts for the stand. As well as the aesthetic option this provides it will also help to match the bottom end to different listening rooms, an often overlooked consideration with stand mounters.

Final set-up was straight forward, with the levelling of the speakers made

easy by the three-spike design of the stands. I settled on the lower legs, the speakers gaining a little mid-bass weight in my otherwise fairly lean and well-behaved room. I also added a small blob of Bluetak in the centre of the stands' top-plates, sandwiched between the plate and the base of the speakers to damp them. I ended up with the backs of the cabinets 21" out from the rear wall and slightly toed in. Other than that they performed faultlessly with a variety of driving amplifiers, from the Hovland Sapphire (on its 4



Ohm tap) to the Hegel integrated at a more approachable price. The tweeter control was set at -0.5dB, with variations in its level clearly audible at the listening position, although interestingly, that preference stayed constant across the various amplifiers employed, suggesting that it's dictated more

by room acoustics than equipment matching considerations.

Appearances can be deceptive. Here we have a smallish speaker with a clean, almost Scandinavian appearance. It might lead you to expect a similarly clean, precise, almost delicately academic performance, but that expectation couldn't be further from reality. Instead, it's the M20s' squat solidity that provides a closer impression. This is a speaker that produces its music with scale presence and gusto. The wider spacing helps to create the huge soundstage, but there's more to it than that. The Revel doesn't just sound bigger than it is, it sounds more efficient than its 87dB rating would suggest. That might be down to the creative use of specifications on the part of too many manufacturers, with efficiency figures rapidly becoming as trustworthy as the published weights for bicycles. There's nothing optimistic about Revel's claims, which comes as something of a culture shock, but I think it also reflects the exceptional mechanical integrity of this speaker. It's similar to the effect experienced with the Kharma speakers, which seem to convert ever last electron of the input signal into sound.

I'm sure that a psychologist would have something to say about the hi-fi buff's response to small speakers: reach for a recording with plenty of bass. So why should I be any different? Bass drums, synth lines and bass guitars were all handled with aplomb and surprising weight. Revel quote the M20s as -1dB at 46Hz, and as a reflex design you'd expect them to roll off pretty quickly. However, having played a real range of material on them, I'd have to guess that they're giving decent output, in room, down to at least 40Hz, which is impressive indeed, considering their compact dimensions and the relatively easy demands they place on an amplifier.

That bass underpins the soundstage as well as providing instruments with ▶

▶ a solid foundation. Listening to the *Music For A Glass Bead Game* (John Marks Records JMR15), the instruments are both beautifully proportioned and separated in height. It's clear that the Nathaniel Rosen's cello is slightly forward of Delmoni's violin, but the really impressive thing is the physical volume and vibrant, woody energy of the larger instrument. There is real energy and spirit in the playing, and the speakers succeed in communicating that fact admirably.

There's also pleasing focus and transparency about the sound, and if the M20s can't quite match the intimacy, immediacy and micro-dynamic vitality of the comparably sized and priced Reference 3A De Capo, they offer the alternative of solid presence and three dimensional volume to the images that inhabit their explicit soundstage. The result is a clear, believable picture of events, rather than the pared away, etched and exaggerated view that bedevils too many systems with high definition pretensions.

So much for the delicate, acoustic end of the musical spectrum. Turning to something with rather more sheer power and the rough edges to go with it, let's look at Joe Jackson's excellent live outing *Summer In The City* (Sony SK89237). This might only be a three-piece, but the sound is big and bold, with serious scale and bandwidth. The Revels coped easily with the staccato opening drum cannonade and the percussive piano notes that accompany it. But it's not all about volume and dynamic range. The M20s retain their delicacy even in the face of extreme provocation. The repeated right-hand notes that punctuate the

opening bars of 'Fools In Love' are precisely placed and weighted, especially the slight increase in key pressure that greets the drum entry. Graham Maby's bass undulates and rumbles convincingly, with both momentum and clearly defined pitch. It's a capability that extends further to the bass melody that underpins 'Eleanor Rigby' where not only are the notes beautifully spaced in both time and pitch, but they are also clearly separated from the bass drum beats with which they coincide. This is bass that combines weight and extension

with quality and definition. It's an attribute the M20 shares with the other, larger Revel speakers, but at a far more approachable price. The company clearly believes in the musical importance of the low frequencies and goes to some lengths to provide bass that is both deep and informative

The accuracy of the bass also fills out the colour and shape of the mid-band, producing impressive tonal contrasts and easily identifiable instruments and voices. Vocals are expressive, smooth without being robbed of character and inflection. Familiar voices are exactly that and a singer's efforts to shape and work a lyric are clear to appreciate. Overall it's a recipe that makes for engaging and rewarding long term listening. The M20 might be the baby in the Revel range but it still delivers the same convincing scale and musical communication that its more expensive brethren achieve. And like them, and most importantly of all, it makes the most of whatever you feed it, rather than ripping poor

recordings to shreds. Taking the all Madrigal option I used the Revels with the Levinson No 383 integrated amplifier. It's a combination that delivers an astonishing slice of genuine high-end sound in a deceptively simple three-box package.

The Revel Performa M20 is accurate enough to qualify as a monitor, but remains rewarding enough to simply sit back and enjoy your record collection. It has to be the most underrated speaker on the UK market. If I were thinking of dropping two grand on a pair of floorstanders I'd think again. If you demand refined power, scale and presence from your system then I'd seriously investigate this particular surprise package. ➤



TECHNICAL SPECIFICATIONS

Type:	Two-way rear reflex
Drive Units:	25mm aluminium dome tweeter 165mm aluminium inverted dome bass-midrange
Bandwidth:	46Hz - 16kHz +/- 1dB -3dB at 44Hz
Efficiency:	87dB
Impedance:	6 Ohms nominal (4.4 Ohms minimum)
Dimensions (WxHxD):	254x394x311mm (cabinet only)
Weight:	20.4 kg each
Finishes:	Sycamore, Cherry, Rosewood or Black Ash veneers
Prices - Speakers:	£1695.00
Stands:	£249.00
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SPD2-150

ATC SCA2 Pre-amplifier and SPA 2-150 Power Amplifier

by Jason Kennedy

In my experience ATC's active loudspeakers grow on you. When I first came across them in the late eighties they sounded pretty damn rude, bright, aggressive and forward - plenty of energy but little finesse. Perhaps it was because my idea of a great system at the time was based around tube amps and efficient speakers and the opinions I respected felt that inefficient speakers were the work of the devil. But in retrospect I was comparing extremes, power and bandwidth on the one hand versus dynamics and tonal colour on the other. Over the years the two camps seem to have grown closer. There's still plenty of difference but a degree of homogenisation has occurred. This is probably due to a broadening of experience on my behalf but I can't help thinking that both camps have more similar ideas about the sound they are trying to make than was once the case. The firepower camp realising that there's something in timbre and dynamics and the tube/horn guys are coming round to the idea of bass grunt.

The turning point for me came last year when I first tried a pair of ATC actives at home, these were the SCM50s, very hefty £7,000 beasts with 350 Watts driving three cones in very convincing fashion. I like a lot of music that is created largely in the studio with electric and electronic 'instruments' - is a Technics SL1200 an instrument? A lot of music has been re-made with one, so it probably

is. However, with this sort of material be it rock or 'technology' based, a speaker system like this is pretty close to what the engineers and mastering people would have used to balance the recording. In other words with active speakers from a pro-oriented company you're more likely to hear

the balance that the record producer intended than you might with a passive design. Fortunately this doesn't mean that tone colour and dynamics don't get onto the disc as well, otherwise we wouldn't get the fantastic results we do with tube based systems.

One of the things that the SCM50s brought home was that other things being equal modern recordings tended to sound better than older ones. In theory this should be the case, recording technology should have progressed over the last 40 years,

and although SXL2000s can't be beaten on many counts they tend to sound better on systems which are philosophical descendants of the tube era. In the non-classical field most contemporary recordings are better than those that came before them; drums nearly always sound more powerful, bass usually goes deeper and you can play louder before things get painful. The flipside is that compression techniques have become processor based rather than tape related, and there is something fundamentally euphonic about tape compression that electronics can't quite match.

ATC has been building equipment for the professional market since 1974 so it has a pretty good idea of what engineers like in an active speaker, while the success of its domestic designs would suggest that they're not doing badly on that front either. So it was no great surprise when ATC built first a pre-amp to go with its speakers and then a stand alone power amplifier that could be used in any system. The SCA2 pre-amplifier was introduced in the early nineties and provides eight line inputs with the option of turning one into a phono input for vinyl if required - the SPH 2 onboard phono stage costs an extra £355 and allows both resistive and capacitive cartridge matching. My sample was line only.

Stylistically ATC amps hark back to a more flamboyant time. ▶



► Their radiused edges and funky metal feet could have been designed in the seventies. It makes me wonder if founder Billy Woodman has taken the flares revival in his stride(s) so to speak! But hey, the seventies were the greatest; the music was remarkable and the haircuts truly diverse, plus it's high time we got away from featureless fascias and austere simplicity.

Functionally the SCA2 is better equipped than most, with separate listen and record selectors for the six unbalanced and two balanced inputs. Output is available via either flavour in the usual RCA phono

and XLR socketry, these squirt out up to 15 volts RMS, which is said to be enough to drive up to 50 metres of interconnect. Active speakers usually sit further away than stereo power amps, but 50 metres presumably harks to the brand's pro audio heritage.

The fascia sports two less common switches, mute and gain. The former does what it says, the latter decreases the gain of the preamp and allows a greater range of the volume pot to be employed - which is generally a good thing as only the most insensitive power amp/speaker combinations will let you use 50 per cent of the range. However, as is often the case the preamp sounds better at full gain - attenuation is attenuation however you do it.

No expense has been spared on the remote control which follows the brick style of build so beloved of US brands. It's milled out of two pieces of aluminium that bolt together clamshell style, an excessive six bolts have to be undone to get at the batteries which

turn out to be 3.6 volt AA shaped devices. (It sometimes seems that 'unconventional' is something of a watchword down at ATC!) Still I'm prepared to accept that a less exhausted pair of cells might persuade the remote to let one change inputs (record and monitor), adjust level etc and even control the activities of a suitably receptive CD player (anything that's based on Philips internals, ie Marantz, Meridian etc). The pre-amp uses gas



filled precision relays to avoid crosstalk and both in and outputs are buffered to eliminate any distortion introduced by the switching and gain in the preamp.

Both pre and power amps makes great play of the fact that neither unit contains integrated circuits but relies on discrete circuitry for the entire signal path. In the case of the SPA 2-150, a name that fails to deliver the notion that this is rated as a 200 watt design, the output stage is based around grounded source FETs. ATC reckons it will deliver 350 watts into four ohms and 400 into two, and will cope with a complete short for a few nano seconds before the protection circuitry kicks in.

It certainly weighs enough to back this up (26kg it says on the sheet) and runs hot enough to suggest a healthy

percentage of the output is delivered in class A. Unusually the mains transformers are frame types rather than the more common toroidal variety. These are more expensive than toroids and have less focussed radiation, but the type employed in the SPA 2-150 have been designed to avoid this problem so that its advantages can be exploited. These

boil down to a very low interwinding capacitance, and, because of the extra steel, you get better thermal characteristics which means a more stable supply that's not prone to power compression. I have been using the SCA2 in my system for some time now. It usually drives a Gamut

D200 power amp which in turn controls a pair of Living Voice Avatar OBX-R loudspeakers. Sources include an SME Model 20A with vdH Grasshopper GLA III and Groove phono stage, Acoustic Precision Eikos CD player, Sony SCD-555ES SACD player and Pioneer DV-939A DVD-A player. It's a nice pre-amp to use and works with everything you throw at it, which in reviewing work is extremely handy.

I first used the pre-amp with the aforementioned SCM50SL active loudspeakers where its transparency came to the fore, the pairing creating one of the most hear through high power systems I have had the pleasure of using. It really made me think about the advantages of active operation, not to mention wonder about the Ampspeaker designs that Gamut maker Olé Christiansen builds for the pro market. Other pre-amps that I had at the time sounded soft and ►

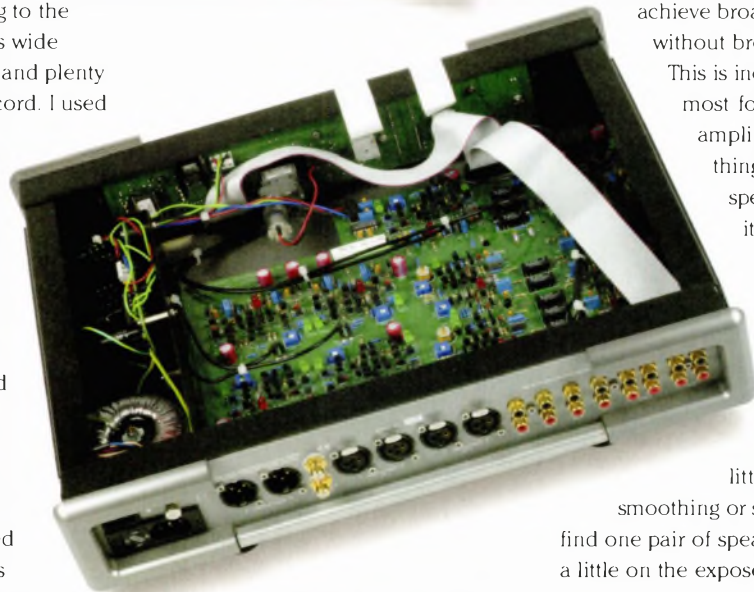
► warm by comparison, but they weren't in the same league pricewise. With either the matching power amp or the Gamut the SCA2 is an extremely precise and clear pre-amp. It revels in detail, scale and articulation. Valve lovers might find it a little too etched in its presentation, leading edges are always crisp and clear but this might undermine fluidity on occasion.



Inevitably you don't get the richness of tonal colour that a valve device can bring to the party, but in its place there is wide bandwidth, plenty of power and plenty of space when it's on the record. I used the ATC combo through a pair of Wilson Watt/Puppies in order to find the variations between Wadia 16 and Mark Levinson 390S CD players. The differences were plentiful and easily resolved by the ATCs which suggested some coloration from the older player but greater depth of image as well.

It's possible that a better amplifier might have resolved timing differences as well, as neither player really stood out in this respect. While there's no sense of imprecision or relaxation on the timing front neither do you get that sense of speed that a few amps can deliver, albeit usually at the expense of some other aspect of performance -

deep bass often as not. The SPA2-150 goes very deep and does so with the same precision that you hear further up the range, if the speakers are up to it. The opening track on Missy Elliot's *Miss E... So Addictive* is a ballad with some very heavy synth work behind the vocals, it digs deep and yet retains articulation and colour with these amps. Anouar Brahem's excellent *Thimar* on ECM served to reveal more tonal vividness, it's a great recording with solo or small ensembles of acoustic



instruments that can sound pretty vibrant in a good system, and this company did it plenty of favours, quite possibly as many as one might hope of a non tube powered set up.

Material with a less acoustic

emphasis is better served still. Tool's *Lateralus* CD has some great electric bass and guitar lines that appreciate a good precise leading edge to sound their best. The ATCs drive along the dark undertow of this heavy sound, effortlessly drawing you into the unwholesome swell.

If anything the sound could be a little more organic or fluid, the degree of control exercised is pleasing in terms of grip however, and the compromise between precision and musicality is always going to be one of taste. There's no lack of subtlety here, delicate music is as well served as heaviness, the pair showing a remarkable lightness of touch and nimbleness when the material needs it. A relatively power hungry speaker like the Watt/Puppy should appreciate this sort of grunt more than the Avatars which require half as much power to put forth the same SPLs, yet both are well served by these

amps which proves that you can achieve broad compatibility without breaking the bank.

This is inevitably not the most forgiving of amplifiers. Put something untoward in and speakers allowing it will come out quite clearly at the other end. There's no distinct emphasis to aggravate matters, just

little in the way of smoothing or softening. I did find one pair of speakers that was a little on the exposed side at high frequencies to be called a good match. This was JBL's cute Ti2K stand mount with its titanium dome tweeter; the latter did tend to sound a little forward in the pre-amp's company, only calming down when tube amplification was brought in to take over the job. ►

▶ Detractors might find a degree of hardness in the upper midrange of the pre-amp but the fact that this only showed up on this occasion would suggest that the speaker was more likely at fault and compatibility is always going to be an issue with good equipment.

recording sounds precisely like that, a less impressive one likewise. There is no artifice to the ATC's sound, you get it all warts and all. So keep your vinyl clean and make sure your CD player is devoid of edginess and these amps will provide you with hours of top notch entertainment.

I suggested early on that recording quality has progressed through the ages, but listening to *Fragile* by Yes on a very early pressing and comparing it to Alice In Chains from the nineties would seem to undermine that assertion. But there are modern recordings that really do represent the pinnacle of sound quality. The fact that record producers sometimes choose to go for the best sounding result when played back on mediocre equipment and/or AM radio is no

reason to blame the hardware. The goal is to make your audio window as wide and as clean as you possibly can so that when the great recordings come along you'll know it. And once you've achieved that you'll be surprised how many great ones there are. Which is a result for which we have ATC among others to thank.

If you are after maximum transparency for your buck this pre/power combo is a hard choice to beat.



Essentially this is an excellent amplifier combination. It is remarkably well made and as a result of its pro heritage extremely rugged - the power amp sample I got to listen to looked like it had served



time with Radio Kabul yet it worked faultlessly. They are fast, very highly resolved and powerful, letting whatever type of music you want to enjoy flow through them completely intact and devoid of extraneous elaboration be it harmonious or otherwise. A good

TECHNICAL SPECIFICATIONS

SCA 2 preamplifier

Inputs:	6x Single ended RCA, 2x Balanced XLR (optional MM/MC phono stage)
Outputs:	1x Single ended RCA, 1x Balanced XLR
Input impedance:	single ended 10k ohms, balanced 5k ohms
Output impedance:	10 ohms
Output level:	single ended 7.5v into 600 ohms, balanced 15v into 600 ohms
Input sensitivity (for 1 volt input):	single ended 150mV, balanced 275mV
Primary stage gain:	single ended +6dB, balanced 0dB
Dimensions (WxHxD):	440x100x360mm
Weight:	9.5kg
Price:	£3564

SPA2-150 power amplifier

Rated power output:	200 watts
Balanced input sensitivity:	1 volt
Balanced input impedance:	10k ohm
Single ended input sensitivity:	2 volts
Single ended input impedance:	10k ohm
Dimensions (WxHxD):	440x146x426mm
Weight:	26kg
Price:	£3239

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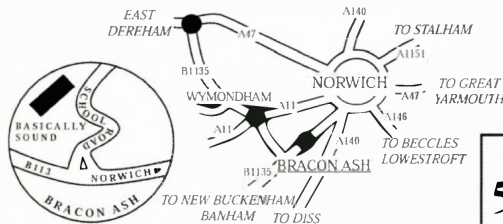
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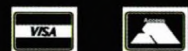


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Down, down, deeper and down...

Subwoofers and the quantity versus quality conundrum.

by Roy Gregory

Back in the late eighties I sold a few pairs of Entec LF30 subwoofers to ELS 63 owners seeking a little more foundation to musical proceedings. Back then that was quite a feat, not least because, despite being the baby in the range, the LF30s weighed in at £3000 a pair (against the Quads £1650). Subs were also a rare and wonderful breed, little trusted and seldom bought.

Of course, all that's changed now, and you can't walk into a hi-fi shop without risking your kneecaps on a host of anonymous cuboids lurking below your standing eye-line. The profile's risen and the price has dropped, largely as a result of the burgeoning interest in A/V and the 5.1 standard that's enshrined the sub-woofer as an essential element. But let's just back-up here a little. Back in the eighties those quad owners dropped three grand because that's what it took to get the quality they required. Well hey, nothing's changed. Subs might start nearer to three hundred these days, but there's a huge difference between trying to reproduce a synthetic train wreck and the harmonic envelope of a plucked bass string. For starters, you've got a pretty good idea what the bass note sounds

like. Fortunately the same can't be said of the train crash, where the assumption seems to be the louder the better.

Which brings us to the great mystery of sub-woofers and the blind leap of faith that so many hi-fi buyers seem only too willing to make. If you go shopping for a genuinely full-range speaker it's going to cost you a serious amount of money. At least it will if quality is an issue. What's the cheapest conventional speaker with an in room response to below 25Hz? Well, in the last issue CB reviewed the Revel Ultima Salon which does just that, and concluded that its 14 and a bit thousand pound price tag constitutes something of a bargain. From the home market the obvious choice would be the £8000 B&W Nautilus 801. The conclusion is clear; serious extension costs money. So why do people assume that if you get your bass from a separate box it's going to cost you less?

Well, subwoofer manufacturers might well have a thing or two to say on that subject. Theoretically at least, deriving your low frequencies from a purpose built device does offer certain advantages. The most obvious of these is the benefit of active drive,

meaning that you can use the amplification to overcome the natural mechanical roll-off of the driver. That means deeper bass from a smaller driver and enclosure. Next up is the fact that you have the option to place the cabinet in the optimum position for bass reproduction and reinforcement, and that's a very different position to the one demanded by mid and treble reproduction. By putting the sub in a corner you can boost its output by anything up to eight times the free space response by exploiting boundary reinforcement. Of course, corner placement and all those early reflections would play havoc with the upper registers if they were coming from the same cabinet. By carefully balancing positional and electrical influences the designer can actually generate significant extension and weight from a surprisingly compact enclosure. Finally there's transient intermodulation distortion, which is a fancy term for one driver shaking another. By placing the bass driver(s) in a separate enclosure you are also minimising their mechanical effect on the mid-band. At least that's the sales pitch.

In practice things aren't quite



▶ that simple. The case for the prosecution please...

If the hardest job facing a speaker designer is combining the output from various drivers in such a way that nobody notices the joins, what do you reckon taking a driver chosen by somebody else and driven by a completely different amplifier is going to do to that equation? The Achilles heal of all sub-woofers, regardless of price, is integration with the main speakers, because without that integration there's no point in using them. Which brings us to the fundamental difference between a sub-woofer in A/V use and one applied to a music system. In an A/V set-up the sub is there to add weight and impact to the aforementioned train-wreck, sundry explosions and the odd dinosaur's footstep. Its contribution is all about bass, with depth and quantity well to the fore. In a hi-fi system the situation is completely different. The main reason you use a subwoofer is because of its effect on the mid-range. Oh sure, it'll also add weight to the odd really deep note, and texture to the mid-bass (if it's working well) but never forget the old hi-fi maxim: The best sub-woofer is the one you don't notice – until you turn it off that is!

So let's look at integration in a little more detail. It's an issue that can be divided into a number of separate concerns. The first and most obvious one is the question of the character and quality of the sound. Bear in mind that you are trying to match the output to a set of separate speakers that will have their own specific characteristics and nature. As transducers they are the least accurate links in the hi-fi chain and those deviations from reality are many and varied. This introduces the problem of a potentially audible difference in the character of the low frequencies as opposed to the rest of the range. Each and every difference that you make to the signal going to

the subwoofer adds to that problem. Thus, different cabling, different amplification, different driver materials can all add to the problems of integrating a subwoofer into a system.

Some manufacturers, REL included as we shall see, prefer to run the inputs to their subs at what they term high-level. In this mode the sub's amplifier receives its input signal from the speaker outputs of the main amplifier. The thinking is that this overlays the character of the main amp onto the signal received by the sub, thus helping homogenise the sound. The downside to this approach is that it also means that the low frequencies are treated to a whole extra stage of amplification relative to the rest of the spectrum. It's a problem that is further exacerbated by the quality of the cabling generally supplied for the hook-up. In yet another case of audio myopia, the industry seems to believe that this doesn't matter. Sorry, but when every single cable review goes to great lengths to comment specifically on the weight, nature and extension of a product's bass performance, I think that's taking a little too much on trust. Likewise, try telling the owner of a pair of Krell or Levinson mono-blocks that the quality of their amplifiers doesn't effect the bass. Yet we are prepared to accept whatever amplification finds itself inside a subwoofer on trust, even to the extent that it is inside, which has to be physically the worst place to put it.

So, a subwoofer has to struggle against misconception as well as its own particular set of design compromises. However, by far the most important issue is the question of positioning. Number one on the list of subwoofer fallacies is the oft-heard notion that "you can put them anywhere". This is absolutely ludicrous as even a rudimentary understanding of room acoustics will tell you. In fact, achieving an even, deep bass response from a sub requires that it be precisely positioned relative to the room nodes,

and that means anything but anywhere. In placing the sub you are playing the room as much as the system, and that's where there's no substitute for experience.

In order to qualify as universal products, all subwoofers incorporate a number of variable interface controls. These cover overall gain and crossover frequency as an absolute minimum, often on simple rotary switches. However, the better units offer precisely stepped values that make adjustments much easier and more repeatable. You should also get a phase switch. In its simplest form that will offer 0 and 180 degree options, although that should be considered an absolute minimum, and constantly variable control of phase is highly desirable. Why? Because along with the volume and crossover frequency, it and positioning are the only ways in which you can properly integrate a sub into a system – and believe me when I say that doing so is an art form all on its own. Tiny adjustments in each of the parameters above will have a profound effect on the success (or otherwise) of the set-up, and not always in the way that you expect, as all are interrelated. Really getting a sub dialled in is a long and time-consuming process.

Given all of the above you might be forgiven for wondering why anybody would bother with subwoofers at all. Well, if you read the above objections carefully, you'll notice that they are, in the main practical. Which is another way of saying that you can overcome them if you try hard enough. The theoretical benefits are significant, and they're sonically and musically significant too – as long as the sub is set up properly. And there's the rub. The sad fact is that the vast majority of subwoofers have enormous potential that's hog-tied by inadequate installation. It's a situation that hasn't been helped by the flood of cheap A/V orientated product of dubious quality that has swamped the market. These ▶

▶ have at once raised the product's profile and confirmed the music lover's worst fears.

Like everything else, the truth is some distance from accepted wisdom. The fact is that a well set-up, decent quality subwoofer will enhance most systems. The problem is in the implied qualifications: what constitutes a good quality sub and how do you get the best out of it even if you have one? Those are exactly the questions that I am going to address, but before we

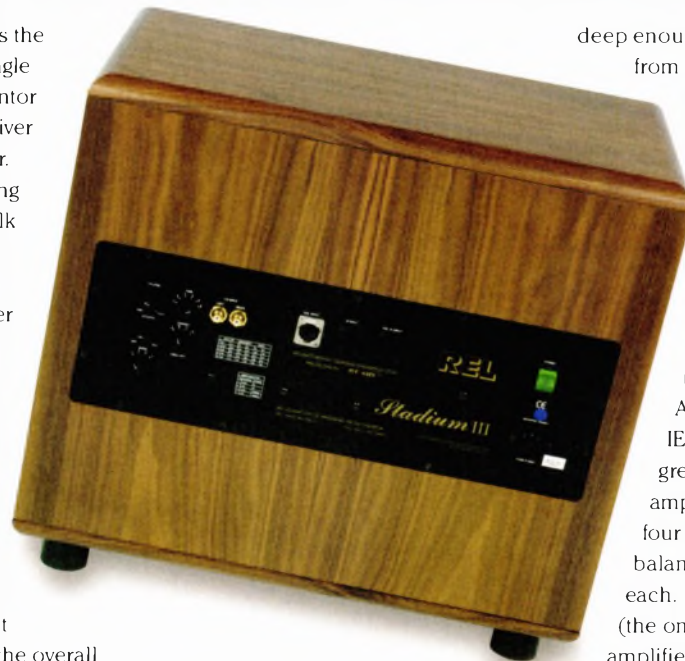
do anything else we need to set some benchmarks, and the first is cost. You can use subwoofers in a number of ways, and particularly with speakers that offer limited bandwidth, a relatively modest unit (in terms of overall extension) can offer serious benefits. Indeed, sometimes it's easier to realise the performance potential of such a device than a bigger and deeper design. However, if we are investigating the realms of real bottom octave bass delivery and the kind of subs that will

enhance even large floorstanding speaker systems, then you have to look the wrong side of £1500 to get a product capable of really musical performance. The unit I've settled on is the REL Stadium, and I've chosen it for a number of reasons. Highly regarded and widely available, it fits the pattern of a good quality modern sub almost exactly. As regards what it offers, and more importantly, what it does, well, for that you'll have to read the review.

The REL Stadium III Subwoofer

REL's Stadium subwoofer is the companies' next to top single driver model. Only the Stentor and the enormous twin driver Studio go louder or deeper. Even so, it's still an imposing creation as far as sheer bulk goes. However, it's an essentially straightforward realisation of the "big driver in a bigger box" approach. The 65 litre enclosure is constructed from 30 mm MDF and contains a heavy duty 10" driver and a 200 Watt amplifier, all of which is pretty much par for the course. The whole kit and caboodle weighs in at a substantial 50 kg, and if the overall design could be accused of a lack of subtlety, then it's hard to argue with the execution.

The driver faces down towards



the floor, covered by a protective mesh grille and accompanied on the underside of the cabinet by a reflex port wide and

deep enough to swallow my (far from spindly) forearm whole.

Spacing from the supporting surface is provided by four 40mm high by 50mm diameter Delrin feet, each threaded for a large M8 spike. But the interesting stuff is all on the back panel, where the controls and input options are laid out. Aside from the obvious (an IEC mains socket and large green on/off switch for the amplifier) there's a choice of four inputs: high and low level, balanced and unbalanced for each. Both the high-level inputs (the ones that connect to your amplifier's speaker terminals) use Neutrik Speakon connectors. REL supply a basic three-core lead with bared wire at the amplifier end and the necessary plug at the other



▶ which can be used to connect to the unbalanced input. Alternatively, a simple pair of phono to phono interconnects can be connected to a pre-amp output, either from an integrated amp or additional outputs on a line-stage. The balanced inputs are more limited in application, being single channel connections. The XLR is intended primarily for professional applications with mixing desks, while the high-level balanced option is for connection to differential output amplifiers (mono-blocks that use a bridged circuit topology). The latter option dictates the use of two woofers, but that is advantageous for reasons we'll get too later.

The appropriate input arrangement is selected using a four-position rotary mode switch. This allows the user to configure the amplifier for a standard full-range signal at either high or low level, or an LFE input derived and bass managed by a home-cinema processor. The LFE input is passed straight to the woofer's power amp, while the standard inputs both pass through the REL's comprehensive filter section. Positions three and four offer the same two input options but 180 degrees out of phase. Incidentally, as both the high and low level options can be connected at once, and enjoy separate volume controls, the REL can be simultaneously connected to and optimised for both a stereo music system and a home-cinema set-up. So subtly and sheer wallop out of the same box, in theory at least.

All of which is very sensible and well thought out. But the really nice aspect of the Stadium's controls is the filtering arrangement. The use of a four-position course selector combined with a six-position fine control provides

user selection of roll-off frequencies between 22 and 95Hz in 24 discrete, semi-tone steps. The volume controls, despite being continuous in action also feature soft detentes, making repeatable adjustment far simpler. All in all it's a carefully considered arrangement that should allow the user to realise the REL's potential. Dependent of course, on set-up...



The REL is far from the first sub that's visited my listening room (although none have yet taken up residence), and that at least gave me a head start as far as positioning was concerned. However, even then, small shifts in the order of a centimetre or so still produced audible differences in the depth, weight and linearity of the deep bass. These were most easily heard with sweeps, and just to keep things interesting, the positional shifts had to be made with the spikes in situ, as removing them alters the distance between the bass unit and the floor, and yes you will hear it! Having settled

on an approximate location, it's time to confirm and refine it with music. What you use is up to you but it should have clear, repetitive bass notes, preferably with pitch shifts rather than a simple repeated note. I use the Analogue Productions re-issue of This One's For Blanton, which provides a feel for weight, pitch definition and texture all in one setting. The one thing to

remember is that the position of the woofer will probably be along one of the walls. As well as its location along the wall you must also consider the driver's distance from the wall.

Once you've optimised the location, select the correct input phase (one way the sound will be tight and powerful, the other, loose and flabby!) and then think about

the integration of the sub with the main speakers, using the level and crossover controls. Avoid the tendency to crossover the sub too high and remember that the two controls work in tandem: reduce the crossover frequency – increase the volume. Once again slow but sure is the order of the day.

From the above you'll have gathered that this is a procedure best carried out with a bit of help. Once you've arrived at a basic set-up, expect to refine it over a period of weeks. As luck would have it I was just getting happy with the results I was achieving when I received an extremely succinct set of instructions hot off the press at REL. Following them delivered a different position, different settings and a slightly different result. I reverted to my original hard won set-up, but ▶

▶ the REL approach delivered something darned close in overall terms, and in a fraction of the time. I also ended up using the high-level input. For some as yet undiscovered reason the low-level input connected directly to the pre-out produced even greater bass transparency but left-channel high frequency distortion to go with it. (I'll investigate further and report back when I solve this one.)

So, how do you know when the sub's working well? Which question brings us to the sonic benefits:

I used the REL with the Audioplan Kontrast and Reference Audio floorstanders as well as the Revel Performa M20s, with remarkably consistent results in each case. Let's use The Cure's seminal album *Seventeen Seconds* as an example. Sparse and bottom heavy, this is music that depends on the pitch and timing of bass notes to hold the listener's attention. The convoluted, overlapping textures of bass drum, bass guitar and keyboards create a soundscape behind the jangling guitar and driven snare and Robert Smith's sardonic, off-beat vocals. You need bass depth and power to do the music justice, but you need pace, insight and momentum too.

Adding the REL to the equation transforms the sound. It takes the soundstage out of the plane of the speakers, adding depth, width and overall coherence. The instruments no longer seem to clump in the speakers, instead inhabiting a single all-enveloping acoustic. The bass drum and guitar both gain weight and bottom to their notes, while the separation and body of images both improve. And bear in mind that the Audioplans and Revels

are both speakers that already excel in the presence and solidity of their soundstage.

Now, in the best traditions of the beast, this is with the sub set so that you are unaware of its contribution: No thumping, rumbling flatulence here. Turn it off though, and you'll be astonished as that cavernous soundstage crumbles before you, the bass drum loses its energy and attack, and the bass guitar sounds like it's lost half its fret board and



a couple of strings.

You want fundamentals and the REL delivers them. You want weight and it does that too. Get it set-up just right and it integrates seamlessly with the main speakers – and I can hear all those sneers and suppressed giggles from here. But before you dismiss this as the ravings of a dullard blown away by the sheer weight of proceedings whilst overlooking the musical damage done by a slow, ponderous bass, get a load of this. *Seventeen Seconds* is intensely rhythmic music. It's also stately and unhurried. The slightest lag in the lower reaches and it starts to drag like the

clock at a Wimbledon football match. But adding the REL to the mix had exactly the opposite effect! Far from slowing or dragging the bass picked up. Why? Because the actual weight of the notes being present positions them more precisely than the overtones you were relying on before. Also, the added air and space around and below each note gives a greater sense of its energy and initial impulse. The languid pace of many of the songs benefits from the improvement in pacing and expression in the lower registers, where the music seems to breathe much more easily. The result is bass notes that are more accurately delivered, temporally and in terms of pitch, with the spaces

between them and the air around them as well.

That's the effect the REL has on CD reproduction.

Play the LP with its superior resolution and dynamics and the results are even more marked. But the basic benefits remain the same, regardless of source or speaker. In fact the

greatest variation is in the way the subbed system responds to different types of music. Large-scale orchestral recordings benefit from the added weight and scale available, as well as the improved sense of transparency and spatial coherence. But it's small-scale, intimate works that really blossom: Chamber music and acoustic pop where the system can match the scale and weight of the original. Adding the sub matches the bandwidth and weight whilst at the same time opening out the midrange and increasing the immediacy: Impressive stuff.

The musical performance of a well set-up REL fully justifies both its inclusion in a high-quality music system and its status as a benchmark. It's the most affordable sub-woofer ▶



▶ that is capable of matching the subtlety and transparency of a hi-fi mid-band. It also offers a better than even chance of realising that performance, which is more than half the battle. Using a pair of sub-woofers offers significant benefits, which have nothing to do with stereo. Instead it's to do with the increased power and drivers sharing the load, but more importantly, the way two separate

low-frequency sources energise the room. The cost of course comes in an asking price that doubles along with the number of cabinets. I'll be looking at a few more sophisticated, and in many cases far more expensive, subwoofers in upcoming issues: But it's a single REL Stadium III that sets the standard for comparison. ▶+

TECHNICAL SPECIFICATIONS

Type:	Active sub-bass system
Driver:	250mm long-throw paper cone
Enclosure volume:	65 litres
Amplifier:	200 Watts/RMS
Inputs:	See text
Input Impedance:	Low-level - 100 kOhms High-level - 10 kOhms
Bandwidth:	18 - 100 Hz
Dimensions (WxHxD):	590x555x370mm
Weight:	50kgs
Finishes:	Black Ash, Cherry, Light Oak, Rosenut and Walnut
Price:	£1500

Manufacturer:

REL Acoustics Ltd.
Tel. (44)(0)1656 768777
Fax. (44)(0)1656 766093
Net. www.rel.net

Given the complexities of sub-woofer set-up and integration, I was interested to get Richard Lord of REL to respond to my findings. Here are his comments:

Thanks Roy.

I'm encouraged to see that you enjoyed the Stadium III and that you have taken the trouble to analyse in detail the processes involved in generating and integrating genuine sub-bass frequencies. The key to integration lies in the use of the high-level connection. But it is not true to suggest that signals "are treated to a whole extra stage relative to the rest of the spectrum". REL ensures that the high-level signals are attenuated down by 20dB as they enter their dedicated

REL line stage. Putting the amplifier in the box is perfectly acceptable, provided a high quality amplifier is used. We only use linear power supplies and linear power amplifiers and not switch mode amplifiers, which do exhibit integration problems. This is why good sub-bass units cost so much.

Your comments regarding variable phase are interesting, but experience shows that it is impractical to realize a truly variable phase switch when any form of reflex or transmission line types of loading are in use. These types of loading will themselves introduce phase distortion, which will vary with frequency. Thus any adjustment to phase with a variable phase control is meaningless. It can only be correct at one frequency.

If there were any improvement offered by variable phase, we would use it.

Regarding the left-channel distortion when connected at the low-level input - I suspect the pre-out cannot handle the 10k load of the line input of the REL. That it is only on the left channel suggests differences in load tolerance between the two channels of the pre-out. The input may sound as if it has better bass transparency - but as identical line amps are being used for both high and low level inputs, feeding the same bass amp in each case, the cause may well lie elsewhere. I suspect the REL is just throwing up the differences between the preamp and the main power amp/ speakers. ▶+

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Loth X Polaris Loudspeaker

by Paul Messenger

Some speakers are big; some speakers are ugly. Occasionally I come across one that is both. And the simple fact that it's out there in the marketplace, busily building an international reputation, suggests that the \$5,990/pair Loth X Polaris has the qualities to belie those very obvious handicaps. Certainly it's very solidly built. The estate car was parked outside, and I casually enquired how much weight I would be helping to carry up the drive. "Forty kilos" came the reply, but I hadn't staggered many yards before I knew that was incorrect. One leaflet quoted 65kg, another 90kg, while my bathroom scales will settle for 75kg. That's solid.

The Loth X brand (www.lothx.com) actually comes from Singapore, which is not exactly well known as a source of esoteric hi-fi, not that it matters. The Polaris is just one of eight loudspeakers, which start at \$400/pr and go on up to \$14,000/pr, while Loth X also makes turntables and an SET valve amp. UK distribution is handled by Eminent Audio, however, whose first priority is marketing Croft's valve amplification, for which Loth X's high sensitivity speakers would seem logical partners.

When I first caught sight of the Polaris speaker, I immediately thought 'Lowther'. Even beyond the letters of the two names, there are some very obvious similarities between the single full-range driver used by Loth X, and the classic Lowther device that's been around in various forms for half a century. There are, however, also real and important differences between the two.



And it's also relevant to point out that the reason one

notices the similarities

is largely because Lowther's drivers are both very unusual and have spawned very few imitators. Indeed I'd go so far as to say that the similarities and differences are no greater or less than those between the main drivers produced by any manufacturer of more conventional drivers. Furthermore, if you're going to design a driver in order to operate full range with horn loading, the Lowther model makes a lot of sense. This Loth X device, designed by one Stefan Stamm, is no less logical, as well as a sincere form of flattery.

To highlight the differences, the Loth X driver is just slightly larger, the cone measuring 158mm diameter rather than 150mm. And where the Lowthers use a twin-cone diaphragm, the Loth X is described as a triple-cone affair – even though the third cone is exceedingly tiny. Both use super-light paper cones and super-powerful magnets, which along with the horn loading ensures super-high sensitivity and efficiency. But again there are significant differences, Lowther leaving its paper untreated, while Loth X coats it with a polymeric resin for added stiffness. Loth X also uses an alloy centre 'bullet' and a high power (23,000 gauss) Alnico magnet, and has the confidence to back a 20 year guarantee.

If you go for a full range horn, there's really no way around the need for a large enclosure, and it's virtually impossible to make such a large box elegant, never mind discreet. It's also relevant to point out that this Polaris horn is rather larger than the horns from Beauhorn and Klipsch, for example, because it makes no attempt to involve the room corners as part of the horn mouth. In that respect it's more like the Living Voice Air Partner horn, which has the virtue of great simplicity in the folding, which in turn reduces the inaccuracies and distortions introduced by the horn.

It also means you don't have to place these speakers in corners, which might or might not be a bonus. A corner horn will deliver greater bass extension than a free-standing horn ►

▶ of comparable size, but not everyone has the necessary corners available. In my case there's a doorway blocking one and a storage radiator blocking the other, while a large bow window effectively takes out the other end of the room.

And while it's very difficult to make such a shape elegant, or indeed look like anything other than a small wardrobe, it must be admitted that Loth-X has managed to soften the sharp edges and decorate the outside in a very attractive real wood veneer. The solitary driver sits quite high off the ground, at least a foot above seated ears. This is maybe not ideal from a purist perspective, but it lends fine spaciousness and does no obvious harm.

When I measured the Loth-X (using my regular stereo in-room far-field technique, which is very representative of 'real world' listening conditions), I was pleased to get a figure of around 101-102dB, which is pretty close to the manufacturer's claimed 104dB. That's 12-15dB higher than the typical hi-fi speaker today, which in turn corresponds to a massive shift in required amplifier power. Indeed, even more than that, where a lot of regular speakers 'pinch' extra sensitivity by lowering their impedance to 'suck' extra current from the driving amplifier, the Polaris is an easy load that never falls below 8 Ohms.

If my math is correct (and I have been known to get a bit confused over logarithmic dBs), the Polaris only requires one-fifteenth to one-thirtieth of the amplifier power in order to achieve loudness comparable to an 'average' loudspeaker. This means that your 3W/channel single-ended triodes can pack as much punch into these speakers as a 100W transistor amp into the typical conventional speaker. Which of course explains why valve amps and horn loudspeakers together make such a popular and natural partnership.

Indeed, when I simply hung the Polaris pair on the end of my regular

Naim NAC52/NAP500 pre-/power amp combo, I was immediately conscious that this was a less than ideal match. The amplifier simply has too much gain and power for easy, comfortable use, and as a result the volume control spent nearly all its time cramped down the very bottom of its range. And with these super-sensitive speakers, a smidgeon of background noise, originating in the pre-amp, is also just



audible late at night when everything else's switched off (though in truth this is not a problem in practice).

Before getting on to the actual sound quality, a few more words on the in-room measurements, which are, as usual, very revealing. The news is good, on the whole, and in several respects this is a most impressive performer. High sensitivity speakers rarely offer

a 'flat' or neutral balance, but the Polaris gets quite close through the mid and treble, holding with quite impressive +/-4dB limits above 150Hz.

That said, the balance is far from smooth. Output is distinctly strong 200-300Hz, at 2.8kHz and again at 8kHz, but weak around 1kHz. There's still worthwhile output at 15kHz here, and the complete 6-12kHz octave is arguably a little too strong when right on-axis – over-angling the speakers

inward will probably be helpful in practice.

In context it's no surprise to find that bass delivery is rather less than adequate. The guys at Loth X reckon that, for all its considerable bulk, the Polaris is best suited to smaller rooms. I'll go along with that, as small rooms tend to provide 'room gain' at higher frequencies (say, 50-150Hz) than larger rooms. My own 4.3x2.6x5.5m room is actually a little too large, and while it still adds worthwhile 'room gain', this tends to be at rather lower frequencies, say 30-100Hz.

Varying the placement of the speakers can change the bass balance and integration substantially. I got the smoothest results with the speakers well clear of walls, and rather wider spaced apart than usual, but that still left the bass level rolling off below 150Hz, with the -6dB in-room average at around 65Hz.

Inevitably, this means the Polaris will sound rather lightweight, the more so perhaps because the top end is quite strong. A theory (with which I have some sympathy) is that one should try to balance a speaker about its mid-band, matching the rolloffs above and below. That is certainly not the case with this Polaris.

Lightweight it might be, but this speaker is also exquisitely light on its feet, and therefore a constant source of delight, which seems very fair compensation. Prior to the arrival ▶

► of the Polarii I'd spent a couple of weeks with one of the very finest conventional 3-ways I've tried. Changing over brought a mixture of disappointment and relief, the former because of the substantial loss of any serious bass and weight, the latter for the beautiful coherence, liveliness and dynamic integrity. The simple 'shock of the real' makes one powerfully aware of the advantages of eliminating the crossover network and going for super-high sensitivity.



There happened to be a lot of entertaining football on the box during the period I was writing up this review, and I was constantly amazed at the wonderful realism of the crowd noise, which the speakers delivered with magnificent dynamic range and detail, and a remarkable freedom from timesmear. At the same time I found myself spending plenty of time on Radio 3, simply because the subtle textures of orchestral instruments sounded so scrumptiously convincing.

Yes, there is a measure of coloration

here, and perhaps the top end is a little too strong, especially if you like playing your system loud, and, like me, suffer from the excoriating effects of modern recording practices. I suspect that the 2.8kHz peak – just where the ear is very sensitive – is partly responsible for this speaker's slightly aggressive 'edge', but to some extent it's down to careful and sympathetic system matching. This is an exceptionally transparent and revealing loudspeaker, and as ever such capability can be something of a double-edged sword. Be warned, there's plenty of potential for obsessive behaviour here, switching and swapping connecting and speaker cables to your heart's (dis)content, in the search for your particular ultimate nirvana.

I connected up the Croft Charisma X/Red Shift pre-/power combo (reviewed elsewhere in this edition), and was well pleased, not just with the way it performed, but also the way that the amps and speakers worked sympathetically together. The strength of a high quality valve amp usually lies in its dynamic realism and freedom from overhang, two characteristics which it shares with a full range horn speaker system. Put the two together and I found they complemented one another beautifully, and on a purely practical level I was less conscious of the slight background noise encountered with my regular solid state amps. Indeed, if anything this valve amp's freedom from overhang tended to reveal rather more 'wooden' coloration in the speakers than the transistor amp had done – or was it merely showing up the inadequacies inherent in today's sources? I'm still not completely sure one way or another.

What I am sure of is that I've grown very fond indeed of this loudspeaker, in spite of its considerable bulk, decidedly lightweight lack of bass, and less than

exciting appearance. My better half was even more impressed, and complained bitterly about the return of a "thick'n'heavy" sound when I reverted to more conventional speakers.

Crucially, single-driver horn speakers do it quite differently from the regular direct-radiator woofer'n'tweeter approach – in some ways better, in other ways worse, but certainly differently. If you want an analogy, then compare a motorcycle with a car: both will get you from A to B, but the experience is nothing like the same.

Although Loth X isn't the only manufacturer of full range horns, the approach is sufficiently uncommon these days that many people never even get to hear what they can do. If you're a 'horn virgin' with a passion for hi-fi and music, you really should try to get yourself educated. These speakers are not for everyone, but they do, as one ad agency might have put it, refresh the parts other speakers fail to reach. Deep bass might not be on the agenda, but there's dynamic tension, delicacy and range to die for, and this Polaris is a very fine example of the breed. ►+

TECHNICAL SPECIFICATIONS

Drive Unit:	Stamm Full Range
Efficiency:	104dB/Watt
Impedance:	8 Ohms
Bandwidth:	65Hz - 15KHz
Dimensions (WxHxD):	350 x 1300 x 500mm
Weight:	75Kg
Finish:	Maple, Cherry, Makore, Walnut
Price:	£5990

UK Distributor:

Eminent Audio
Tel. (44)(0)1746-769156
Email. audiognosis@eminentaudio.co.uk
Net. www.eminentaudio.co.uk

Manufacturer:

Loth X
Net. www.lothx.com



The Neat Elite

by Chris Thomas

Would it be wrong to think of the Neat Elite merely as a Petite with bass? It is a Petite in a 3 foot high cabinet, right? Well, yes sort of. But the addition of that extra bass ingredient that the larger cabinet brings results in a speaker of a different complexion, balance and ultimately perhaps, application. So, as a designer, how do you go about adding bass to an already successful model without compromising the original's fine balance of qualities? Carefully, is the answer. Speaker designers have, for years, been getting their knickers in a twist over the bass conundrum. There are a growing group of speakers able to produce almost magical amounts of controlled bass from impossibly small cabinets. It is all a question of moving air and single 5 or 6-inch drivers in small cabinets don't move very much. But designs like the fantastic little Red Rose R3 (now sadly and inexplicably no longer with us) are stretching the envelope. It is remarkable, not so much for how low it can go, but in how understandable and pitch coherent it is down to these frequencies, and I think it achieves this partly because of its speed. Not so much how the fast rise time of the bass notes are handled but also in the way that each note is released. Remember ADSR? -attack, decay, sustain and release. This describes the energy profile of each note and for any audio component to work musically it has to be able to trace each part of the note's life from birth to death and the better the component the more accurate it will be. Even more importantly it has to be able to do this, while simultaneously

dealing with many other notes, in real musical time and that is a very tall order indeed. I believe what makes listening to the R3's such a musically engaging experience is their response speed and control throughout the note's envelope. So when a bass note finally releases it really does end and there is no residual energy left hanging about in the cabinet or the cone to corrupt the appreciation of what comes next. If there is then the systems rhythmic abilities will be compromised and once you loose musical timing you loose the lot as far as I am concerned and you are left with sound but little music.

So, design and build a speaker with speed and note

control and you have a chance of rhythmic progression that means that you can make some real music. But, according to speaker designers I have spoken to, there exists a seemingly insatiable demand for bass from the audio buying public who apparently want to swim in it. Additional bass also fleshes out the sound and makes it bigger, increasing the scale and weight of the musical performance. But the more bass, the bigger the interaction with the room and there lies another set of compromises. What I am looking for in any loudspeaker, regardless of

price is speed, balance and rhythmic poise above all other things. But not the artificial sense of speed given by speakers with bright and exaggerated leading edges.

The Neat Elite reminded me that, given time, I can live with vast differences in tonality, voicing, bandwidth and presentation but I have real problems when the bass drags the response speed of the speaker back leaving it out of time with itself. One of the things I have always enjoyed about the Petite is its unexaggerated sense of tempo and ability to open instrumental interplay to the ear in such a relaxed way. The control/extension compromise is about right. Couple this with its non aggressive tonal balance and the fact that they always sound bigger than they actually are and it's not hard to see why they are still selling well even after a decade or so in production.

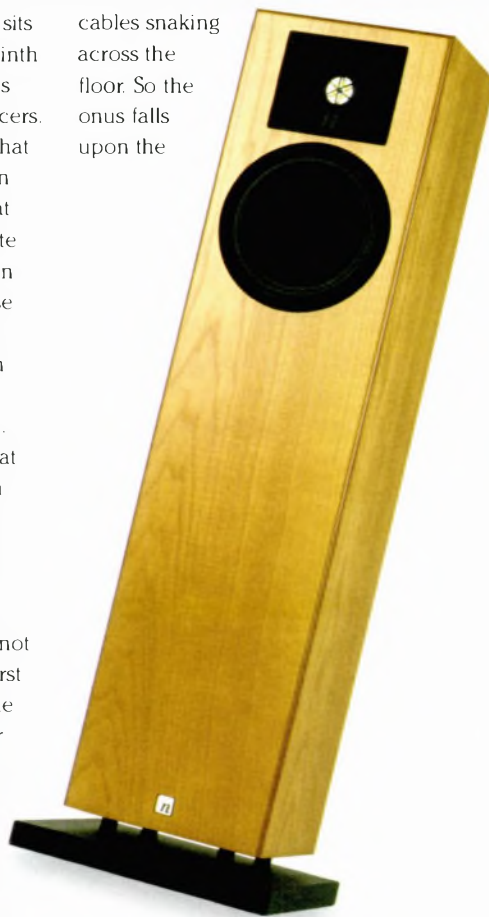
But for larger rooms or those who hear the Petite as being lightweight Neat have been making the Elite ▶



▶ for the past 3 or 4 years. This small floor stander, made from heavily braced 15mm MDF incorporates the same drivers as the Petite in the 168mm woofer, made to Neat's specification by an OEM supplier and the 'radial' version of the EMIT ribbon tweeter. There is a different crossover point but essentially this is a Petite in a bigger box the only dimension that is different being the height. The cabinet itself sits above an oversize (260x220mm) plinth of Welsh blue slate from which it is decoupled by 4 x20mm long spacers. The plinth, Neat assure me, somewhat tongue in cheek, is about 50 million years old. I'll take their word for that but it gives the slender and slim Elite both a solid and weighty foundation and a broader and more stable base for the spikes. It also allows Neat to incorporate a rather large port in the base of the speaker firing downwards directly onto the plinth. This compliments the smaller port at the top rear of the cabinet to form a 'staggered' tuning reflex loading and is critical to the way in which the Elite portrays music.

Though the Elite could still be classed as a small speaker siting is not quite as straightforward as it may first seem. Even with the spikes fitted the Elite is unlikely to bring the tweeter to ear level, which is where I prefer those of the Petite and the immediately obvious increase in low frequency energy and extension makes them more susceptible to boundary effects than ever. Considering how much there is to lose or gain in speaker positioning I'm surprised that more is not made of this critical phase of installation by all manufacturers and dealers. I am forever reading reviews in other magazines where reviewers are siting speakers that I know well, less than a foot from the rear wall where I cannot get them to work satisfactorily at more than three times that distance. Very, very few speakers are designed to

work so close to a boundary and yet I constantly hear designs of all shapes and sizes, generally with rear facing ports, chuffing away far too close to walls and corners with no room for the sound to breathe. I realise that there are aesthetic considerations here and not everyone wants a pair of loudspeakers in the middle of the room with cables snaking across the floor. So the onus falls upon the



manufacturers to provide us with speakers that are designed to work better within real world living rooms with all their inherent problems. Neat suggest starting listening at 30cm distance and go from there but I found the increased bass output shifted the overall tonal balance too far towards the low end, bloating them and slowing the music down too much. I ended up with them sited about halfway between

the wall and the listening position. Not perhaps the domestic ideal, but this worked out quite well as the room was having minimum input yet the speakers were still able to paint an integrated picture.

They have a recommended running-in period of at least 100 hours and they certainly need this and more before their response evens out. But as the Elite has a balance which is just about the complete opposite of that which I am used to, it took me at least 2 or 3 days to get used to them. At first they sounded somewhat dull and soft to me but the ear/brain interface is a weird and wonderful thing which has a peculiarly forgiving nature and once I had 'tuned' myself in I could begin to enjoy them on their own terms.

The Elite is not a speaker that immediately jumps into your consciousness with a high-impact rendition of music. It is quite conservatively balanced due to the smooth and even textured nature of the EMIT ribbon tweeter. High frequency performance seems natural rather than particularly extended and if you are looking for that sense of airy detachment that just hangs shimmering cymbals in space between the speakers the Elite will perhaps not be for you. It is probably also one of the reasons why the sound never feels particularly transparent but also never over-analytical. The soundstage is compact and tight but rarely extends too far outside the width of the speakers. But it is well integrated and gives the music wholesome and balanced quality that makes extended listening periods stress-free. Like the Petite it is hard to spot the joins right up through the midband into the top but the additional bass moves the whole scale and size of their performance to a different level. Low frequency extension is excellent given the cabinets relatively modest dimensions and the bottom port seems to bring ▶

▶ a feeling of separation and independence to bass guitars and the like that the Petite could never manage. The bass seems to float beneath the music and, given the right amplifier, is tuneful rather than precise. But it starts and stops quite well but never completely loses that slight looseness at the extreme low end though it is quite chunky and forceful when it needs to be.

Neat rely exclusively on their ears when designing their products, indeed they may be totally unique in this respect. But to my ears there is a small, but prevalent sense of tonal imbalance in the Elite and I think that the treble needs to be more energetic. It is more than likely just the way I hear things as opposed to the way that Neat do, but it is particularly noticeable on vocals, which I found less understandable than I would have liked. The addition of bass to the Petite's almost perfect balance has tilted the response balance downward and as a result the music does not have that 'lightness' of touch that I like so much. But this is a more profound and serious speaker and with its lush and fleshy midband, tends to grow on you over a period of time. The character of the tweeter is more about subtlety and texture rather than impact and presence and this means that it never, ever grows aggressive. But ask too much of it by pumping in large amounts of power and it just softens up and rounds off a little. It is much too polite to ever sound spiteful.

But the overall integration of the design brings great musical rewards in that it never sounds strained or ill at ease with any kind of material. This is particularly noticeable in the midband which has a dose of timbral warmth to it that, after a while, feels entirely natural and helps to draw

you in. *Dig* by Boz Scaggs (Virgin10635 2 1) and in particular its slow to mid-tempo songs which are a kind of songwriters manual of how to pull all the components together to make them into a complete piece of music. The Elite allows you to really understand the individual parts of the song from the bass line through

the midband instruments that chart the harmonic progression and right to the melody but it never shreds the music or pulls it apart. It remains whole in the way that Scaggs intended,



it's just that the Elite is good enough to allow you in as deep as you want to go. Where it excels though is on moody textural material like Pat Metheny and Charlie Haden's *Beyond The Missouri Sky* (Verve 537 130-2). Such superficially simple music works because of the telepathic sense of time and space that the two musicians share. Haden paints with deep colours while Metheny goes

to work with an air-brush. It is so easy to enjoy this album through the Elite as they capture that colourful, almost lazy, interplay so well and the sound is big and bold enough to roll over you. It's just like looking at a big, colourwashed picture.

Loudspeakers come in several categories and the Elite is one of those that I respect, but could never love. For me the speaker needs more high-end extension, or perhaps I should say that it needs more energy and presence at these frequencies to balance its strength in the bass department. My personal preference would be for the Petite and I'd willingly forsake the extra bass for that sense of balance they have. In the end it may just be a matter of taste though and your source, amplification and cabling are likely to play a big part in how you perceive it. Whatever, you should certainly hear it because if you like it, you'll probably end up loving it. ▶+

TECHNICAL SPECIFICATIONS

Type:	2-way, twin port reflex.
Tweeter:	EMIT ribbon
Woofer:	168mm treated paper
Sensitivity:	89dB
Recommended amplifier power:	25-200 watts
Impedance:	8 ohms
Dimensions (WxHxD):	200 x 900 x 180mm
Finishes:	Maple, Cherry, Rosenut, Natural, Black Ash
Price:	£1275

Neat Acoustics.

Tel 01833 631021

Fax 01833 630022

e-mail bob@neat.co.uk

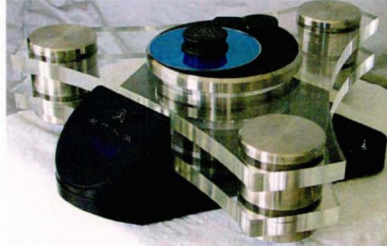
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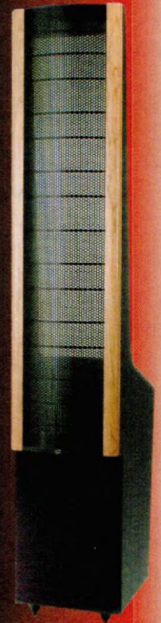
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Croft Charisma X Pre-amp and Red Shift OTL Power Amp

by Paul Messenger

Glenn Croft has been busily building beautiful sounding amplifiers in the Black Country for longer than I can remember, though I'm sure he won't mind me adding that marketing skills are very low down the list of his talents and accomplishments. That the company has survived for so long despite indifferent marketing says plenty about the quality of its equipment, while the relatively recent decision to team up with Eminent Audio has added that missing marketing dimension. The result of this alliance seems to be entirely positive from every perspective, especially style.

Although the power amp is attractively and unusually slim and neat for a valve-driven device, no one could accuse earlier Crofts of being particularly stylish. What with wooden fascias and brass trim, old-fashioned tended to be the first word that sprang to mind, even though the components do possess a certain understated nostalgic charm to these eyes.

This new-look Croft still retains much of the familiar, but puts it into a much more modern context, with thick'n'chunky alloy fascias, shiny polished steel casework, and rather cute illuminated badges, all of which adds considerably to the visual appeal (as well as putting some £300 on the price). The only criticism is that said fascias do have decidedly sharp corners, and stand well proud of the casework proper.

Croft's 'hair shirt' traditionalism remains, however, in the selection of

features and facilities provided on the £2,050 Charisma X stereo pre-amp. It's very purist, to which I've no objection whatsoever, as it makes plenty of sense from a performance perspective. But it's also rather as though the last thirty years hadn't really happened, the feature set reflecting



the somewhat old-fashioned mindset. There's no remote control, and only three(!) line-level stereo phono inputs. A 'record-out' pair is labelled tape (probably with reel-to-reel in mind!).

A fourth input is provided for moving magnet (high level) vinyl pickup cartridges, which again brought a nostalgic twinge. I know there are those who profess to prefer moving magnet cartridges, but I'm not amongst them, and as a long time user of low-output moving-coil cartridges, I queried whether there was any intention to provide matching low-output cartridges. In fact plans are well advanced to provide a higher gain phono stage to handle low output m-cs, based on

J-FETs in order to keep noise low, though unfortunately this was not quite ready in time for this review.

Another Croft tradition is to use separate volume controls for each channel. This minimises the number of potentiometers needed and helps keep the channels well separate. But it also makes achieving correct channel balance more than a little tricky, while actually adjusting the volume becomes a pain in the butt, because of the need to reset the balance by ear every time you want to make a change in level. Purist it may be, and practice might well make perfect, but over the short term I found it difficult to set this right, and can fully understand why the approach has never really caught on.

The pre-amp is available in zero and high (+12dB) gain versions, the latter (which inverts phase) being supplied for this review. In fact the zero gain version is considered superior, and would made a sensible choice here (given the super-high sensitivity of the Loth X speakers which arrived at the same time from the same distributor). Simply for reasons of availability, however, we ended up with the higher gain option. Accordingly, the speaker connections from the £2,950 Red Shift power amp – itself a feature-free zone – should be re-inverted by reversing the polarity at either its or the speakers' terminals (but not both).

So much for the outside and the obvious. It's the insides that really matter of course, and it's here that Croft's

▶ individuality really asserts itself. As tends to be the way with relatively simple valve pre-amps, much of the cost is down to the high class components used in its circuitry. These include paper-in-oil output coupling capacitors alongside tuned bypass capacitors, precision metal-film low noise resistors, and a double-capacity power supply toroid.

This Red Shift power amp, rated at

A year or so ago I got to try one of Croft's less expensive pre-/power amp combos – a Vitali SC/Series 5C, priced at around half the cost of this Charisma X/Red Shift combo. My abiding memory was of a delightful transparency, dynamic tension and great timing, but also that the sound was somewhat marred by a bright 'shiny' quality which was a trifle wearing over the longer haul, and a definite disincentive to playing the system at high volume levels.

The joy of this Charisma X/Red Shift combo is that it has all the sweetness and delicacy – and more – that I recall from the Vitali SC/Series 5C pairing, but without the shiny forwardness that tended to undermine that less costly combo. Indeed, after a few days enjoying this output-transformerless valve device, I found it very difficult to go back to my regular (and considerably more expensive) solid state

amplification, which sounded somehow thick and congested by comparison.

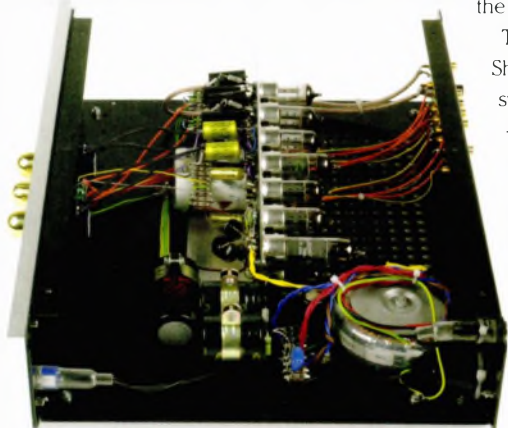
What impressed me most about this Croft combo was the way it seems to have the all the delightful mid/top end sweetness and delicacy one has come to associate with high class thermionic devices, yet with the sort of overall neutrality that it normally part of the solid state experience.

A lot of people seem to like valve amps because of the warmth and romanticism they seem to bring to the party. That is not my personal preference – nor I gather where Glenn Croft is coming from either if the sound of this amp is anything to go by. Perhaps it's the absence of output transformers, and the consequent closer coupling between the output valves and the loudspeakers, but there seems to be much less of the 'coloratura' effect here than I normally associate with

valves, and the sound is all the better for that, to these ears anyway.

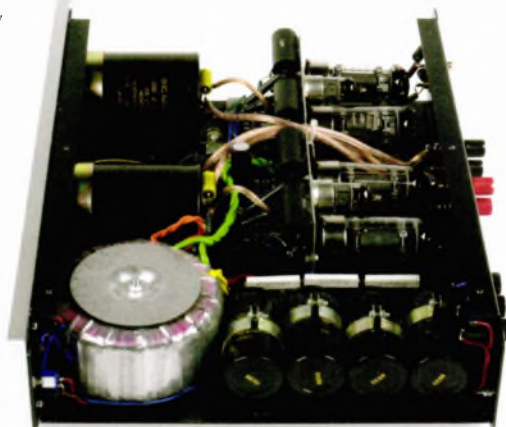
Ultimately, there's a slight tendency to favour the top end over the bass, and a very mild loss of low end and authority is apparent on weighty material. It even passed the KLF test without a qualm, rendering complex and subtle bass textures without apparent difficulty or distortions. Indeed, the reproduction of a church organ during one of Radio 3's (excellent) Choral Evensong programmes recently was quite stunning in its exceptional and convincing realism.

Indeed, provided one keeps within the (modest) power envelope, this amplifier sounds reassuringly clean right



10W/channel into 8 Ohms, is based around two type 6080 double-triode output valves per channel, in single-ended triode push-pull operation. Paper-in-oil coupling capacitors are again used throughout, along with non-inductive wire-wound resistors, tuned by-pass caps and full frequency copper wiring. Incidentally, those interested in Croft's CTC Transformerless valve amps, but for whom a 10W power rating is insufficient, should note that there's a significantly larger 50W Dakshini, which uses six valves per channel in a much larger open-chassis layout, and is priced from £3,300.

One point that might or might not be relevant is that even this quite modest power amp chucks out quite a lot of waste heat. This might or might not matter, though it can become a pain in high summer for those without air conditioning, and it does make ventilation provision important under all circumstances.



across the audio band, with notable clarity and accurate tonality throughout its dynamic range. It's particularly good with the delicate fine musical detail and the texture of acoustic instruments, where solid state amps tend to sound clogged and thickened by comparison.

The major practical limiting factor with this amplifier is likely to be its low power output, depending to a considerable extent upon the loudspeakers it's used with. Obviously super-sensitivity horns like the Loth X Polaris (or indeed the Beauhorn Virtuoso I reviewed two years ago for this journal), which combine sensitivity ratings of 100+dB/W with 'easy' ▶

► 8 Ohm loads, will not stress a 10W/8 Ohm amp such as this, and will deliver ample loudness too.

But the majority of speakers are likely to have around 10dB less sensitivity, as well as quite probably a load that drops to a 4 Ohm minimum (where essentially just 5W maximum power is available, see Box). Here the loudness capability becomes altogether more marginal – the more so because this amp sounds so good that you really want to start winding up the volume, and wind it up some more, especially with rock or dance material. Naturally this is much less of a problem with acoustic sources, though a full scale orchestra is a potential source of stress.



It's tricky to try and predict the exact interaction between this power amplifier and any given loudspeaker type. For some of the time I used the very transparent and revealing B&W Nautilus 800, which is certainly a difficult load (dipping to just 3 Ohms through the power-hungry mid-bass), but which also has a very generous sensitivity of around 93dB. This combination worked very satisfactorily up to a point (ie qualitatively speaking), but the inability to play decently loud was certainly also in evidence. I could get levels measuring up to c95dB peaks in the listening zone, which I found adequate enough for most purposes, but it could get a mite frustrating with some material.

I spent most of the time focusing on

The heart of the power delivery limitations here is that, over the years, speaker makers have tended to evolve their designs to suit the typical transistor amplifier, which is essentially a voltage source with a low source impedance. Halve the speaker's impedance from 8 to 4 Ohms, and the speaker draws twice the current and hence power from the amplifier. This extra power gives an increase in apparent (though mythical) sensitivity, so once one manufacturer adopts the strategem, others are effectively obliged to follow.

Unlike transistors, valves have a high source

the pre-amp's line level inputs, using my regular sources which include a Magnum Dynalab MD102 tuner, Naim CDS II and Rega Jupiter CD players, plus a hybrid Linn/Rega/Naim vinyl spinner which delivers a post-EQ line level output from a low-output Linn Arkiv B moving-coil cartridge. I also checked out the Croft's moving-magnet phono stage, which seemed to work perfectly satisfactorily, though it did nothing to change my long term personal preference for the low-output m-c approach. To sum up, there's something about Glenn Croft's amplifiers

which is both exciting and enervating, yet also irritating. These are the hi-fi equivalents of extreme machines, making no concessions to either mainstream ergonomics or audiophile fashion. Yet for all that they deliver a revelatory high standard of sound quality, at the sort of prices that must leave most 'high end' brands squirming with embarrassment.

That's certainly true of this Charisma X/Red Shift combination, which seems exceptional value in a 'high end' audiophile context. The only down sides I've been able to find are the limited power delivery and idiosyncratic ergonomics. Over twenty something years Croft has been one of hi-fi's better kept secrets,

impedance and behave as current sources.

In order to transfer power to a loudspeaker they are normally coupled via matching transformers. However, a direct-coupled valve system, such that as used by this Croft amp, inevitably finds it that much harder to transfer the power. Instead of doubling power as impedance is halved (a la transistor amp), because maximum current is the limiting factor, the power delivery capability is actually halved. The 10W available into 8 Ohms therefore becomes just 5W into the (increasingly widespread) 4 Ohm load.

supplying sparklingly superior sound quality at surprisingly realistic prices. Its quirky individuality should ensure it remains a small specialist/enthusiast brand, but in truth I wouldn't really want it any other way (and I don't think Glenn would either).



TECHNICAL SPECIFICATIONS

Charisma X Pre-amp

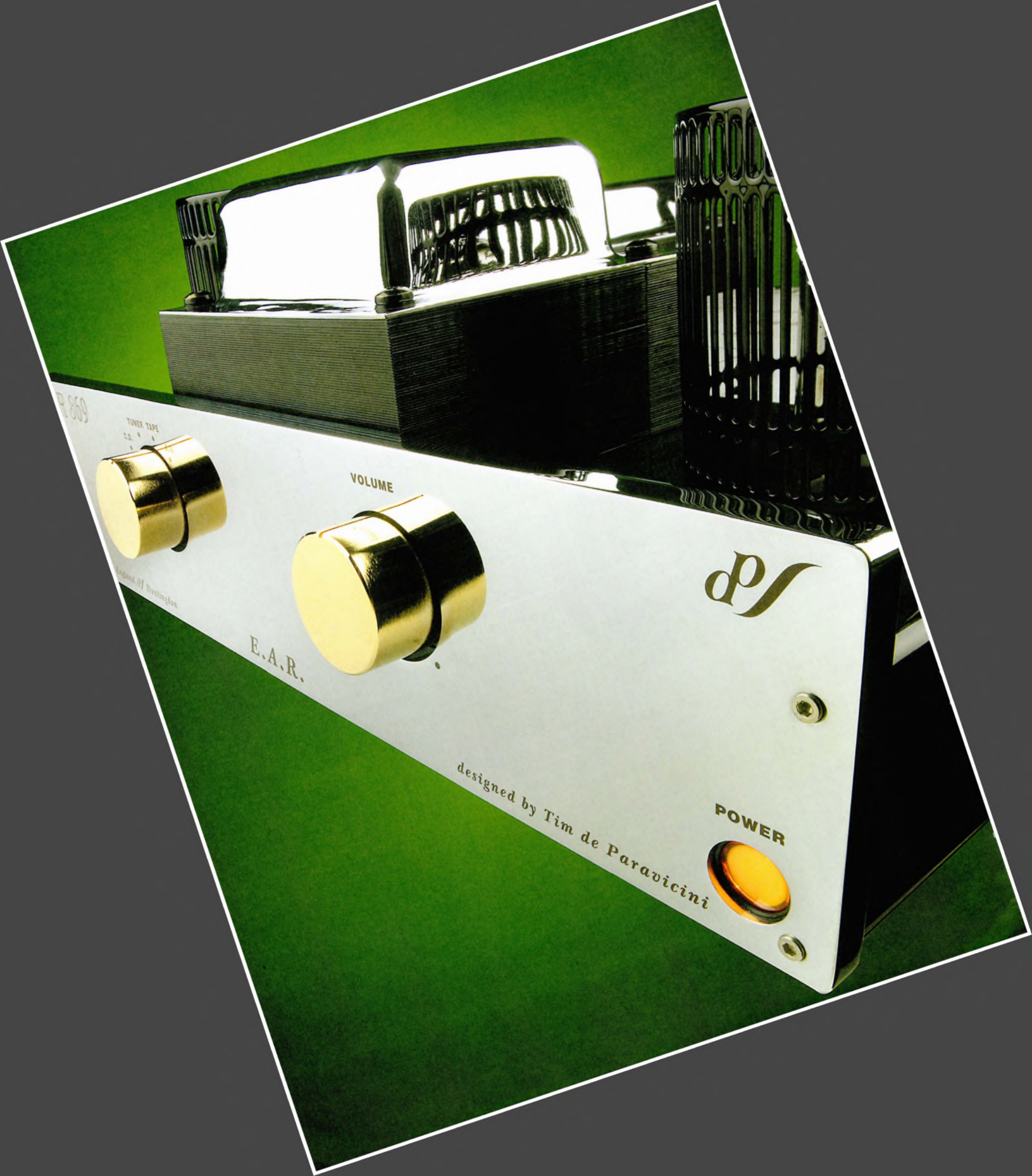
Inputs:	3 x Line, 1 x MM Phono
Outputs:	1 x Main, 1 x Tape
Output Impedance:	40 Ohms
Valve Complement:	4 x ECC83, 1 x 6463 PSU: 1 x ECC83, 1 x 85a2 1 x EL86
Dimensions (WxHxD):	442 x 105 x 355mm
Weight:	12.5Kg
Price:	£2050

Red Shift OTL Amplifier

Inputs:	1 pr phono
Input Impedance:	470 Ohms
Input Sensitivity:	0.5v for 10w
Outputs Power:	10 Watts/8 Ohms
Valve Complement:	4 x 6080, 2 x EF91 2 x ECF82
Dimensions (WxHxD):	442 x 105 x 355mm
Weight:	13Kg
Price:	£2950

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EAR-869

Integrated Amp

by Jimmy Hughes

Most reviews, by their very nature, chronicle a first encounter. Naturally, as much time as possible is spent with the product before writing commences. But (at best) we're usually only talking of a few weeks. My sojourn with EAR's 869 follows this pattern. But, for me the experience was very much one of coming home rather than having to acclimatise to something new and unfamiliar. As a satisfied long-term user of EAR's 859, the 869 was pretty much a case of more of the same.

True, I'd temporarily put aside my 859 in favour of Papworth's TVA-1. But, so etched in the memory is sound of the EAR, that firing-up the 869 immediately rekindled old memories. There's a lovely relaxed and natural quality about the 859. The presentation is lively and detailed, yet at the same time smooth, warm, and very melliflous. If you ask me, it's as near perfection as you're ever likely to hear. Moreover, the asking price is very affordable – as High End audio goes.

Now I've had my 859 since 1998, or thereabouts – bought secondhand from a friend. Even then it wasn't new, my friend himself having bought it secondhand. Why anyone gets rid of such a marvellous amplifier defies logic! It's still got its original compliment of valves, a tribute to the easy-going nature of the circuit which does not 'stress' the tubes excessively. But, of late, I'd begun

to wonder if the sound hadn't lost a little of its original brilliance and bite.

Getting the Papworth rather suggested it had, and I was impressed by the latter's extra brilliance and detail. Of course what I should do is get my 859 back to EAR for an overhaul. Alas, I'm a lazy so and so... Because it's still working (and working well) I've put off



getting it seen to.

That seems to be the way with EAR 859s – like old soldiers, they never die, just quietly fade away. Getting the 869 would doubtless highlight any shortcomings in my old 859.

But – would the 869 really be any better? And if it was, in what sort of areas would the improvement manifest itself? To tell the truth, I wasn't sure quite what to expect. But, on getting the 869 up and running, I experienced much of the excitement I remember feeling when I heard the 859 for the very first time. Compared to what I had it was a revelation. Likewise, the 869: I was immediately impressed by its

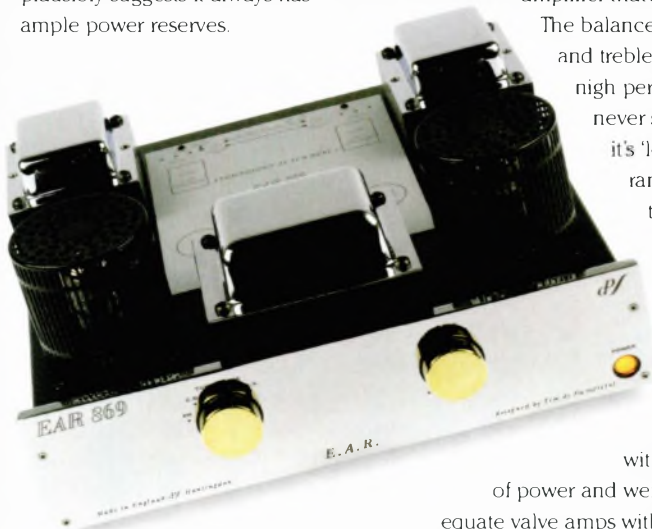
spaciousness and dimensionality, its vivid holographic 3D soundstaging.

The sound had presence and body, yet the overall impression was one of easy fluidity coupled with a complete absence of strain. It's a winning combination. And I'm tempted to say that few amplifiers at any price combine these desirable but opposing characteristics. I think it's born of a near ideal trade-off between having a simple but near perfect circuit, and limited but sufficient output power. It would be very difficult to increase power levels and still maintain this quality of sound. Power output is a restriction. Being limited, the use of low-efficiency loudspeakers is a borderline thing. Even with the relatively sensitive Impulse H-1 horns

I use, my old 859 could run out of steam – for example, when playing heavy choral music at realistic volume levels. In this respect, the slightly more powerful (an extra 2W!) 869 betters its predecessor, giving noticeably greater headroom for peaks. And just like the original design, it tends to compress rather than clip when pushed hard. Trouble is, the 859/869 tends to sound so at ease with itself, you're hardly aware it's approaching the limits of its power envelope. Most amplifiers tend to become stressed and ragged as they reach peak output. By comparison, ►

▶ the 859/869 always seems so darn relaxed. The killer climax arrives, and you might perhaps sense the sound holding back ever so slightly. But, often the effect is so subtle that only a highly experienced ear would know the amp had reached the end of its tether.

Like a canny politician being economical with the truth, the 859/869 plausibly suggests it always has ample power reserves.



Put another way, it simply doesn't sound like a 'small' amplifier. For all its exquisite subtlety and finesse, it's big and ballsy, producing strong cleanly-defined images that holographically detach themselves from the loudspeaker boxes. It does so by the quality of its sound, not brute force. And implies muscle that isn't really there – at least not in the sledgehammer sense. Nevertheless, given speakers of reasonable efficiency (my Impulse's are about 95dB/W) you can enjoy room-filling climaxes with large-scale symphonic and choral music with little if any restriction in terms of loudness levels. There may be limitations on paper, but only headbangers with average sensitivity speakers are likely to encounter problems. In any case, the 869 isn't really an amp for headbangers; it's altogether too subtle and refined for those wanting quantity over quality.

Although it does sound smooth, and melifluous, sonically the 869 does not fit

the cliched warm, rosy, valve amplifier stereotype. Its warmth and liquidity are innate; a product of exceptional linearity rather than pleasant additives. The 869 does not sound 'soft' or vague; it's sharp, lively, and very detailed. Yet always there's a sense of relaxed effortless ease that gives the music a sweet flowing quality. There's a 'rightness' about this amplifier that's unmistakable.

The balance between bass and treble extremes is well-nigh perfect. The top-end never sounds as though it's 'leading' the mid-range or bass. The treble remains articulate and brilliant, but always perfectly integrated and very clean.

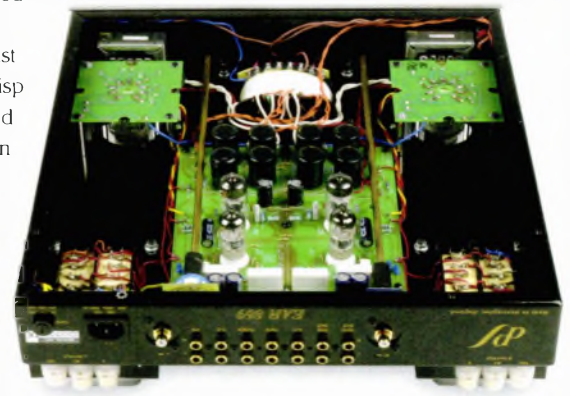
Bass is firm and extended, with a palpable sense of power and weight. Those who equate valve amps with smooth rolled-off treble and soggy bass will find the 869 sounds as firm and controlled as the best transistor designs.

Musically, the 869 sounds fast and articulate. It's capable of crisp phrasing, with precise attack and sharp transients. Pitch definition is exceptionally good; likewise the ability to maintain clarity between complex extremes of loud and soft, high and low. But this is at best a clumsy description of the way the 869 lays bare the soul of the music by simply letting you hear what's there, without fuss or drama. The sound is informative, stimulating, and attractive. All at once.

Surprisingly, given all this, there's no sense in which the 869 draws attention to itself. Actually, maybe that's not 100% true. Doubtfully for the first few days (or weeks) you'll sit there revelling in the music thinking you've never heard your system sound so good. However, believe

me, it doesn't last. Given a couple more weeks you'll find it hard to 'notice' the 869. It's as though there isn't amplifier in the system, so effortless and transparent is the sound. I found this with the 859; it's equally true of the 869.

Running-in time lasts about a week. But, you're about 70% of the way there after the first evening. From then on, there's a slight increase in spaciousness and ease; the sound seems to free-up and become more relaxed. Warm-up time seems minimal. Like the 859, there's little if any subjective improvement after the first few minutes – though you can hear a sporadic tinkling from the output tubes during perhaps the first 20 minutes or so as the glass reaches operating temperature! My review 869 produced a few seconds of hum during the first minute or so after being switched on – something my old 859 never did. However, it's nothing to worry about – just a question of which valves warm up first. Apparently some 859s do it! The 869 offers a few extra features over the 859, among them a switch and an extra set of input sockets to allow the



amplifier to be used with an external pre-amp, plus an extra set of loudspeaker output terminals to match 15 Ohms.

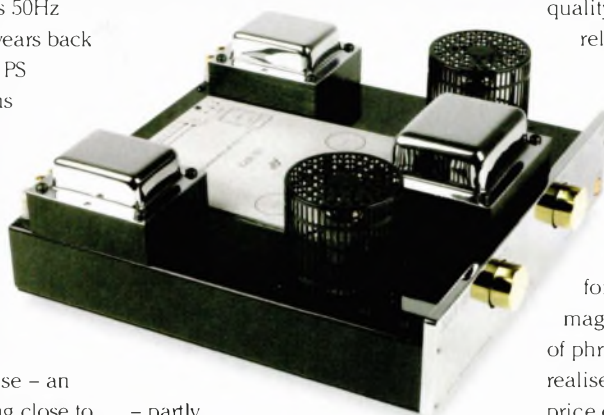
Compared to the 859, the 869 has a slightly revised circuit, with an extra valve added to make things behave more predictably. Output has been increased marginally, but alas 859s ▶

▶ cannot be upgraded. Cosmetic appearance is virtually identical to a late-ish 859, with attractive chrome-plated transformer covers. My 859's mains transformer is slightly noisy; the review 869 is quieter, though not totally silent – a faint buzz can just be heard when sat close by. This noise seems to be down to the mains transformer being slightly unhappy with the UK's 50Hz mains frequency. A couple of years back I was able to try my 859 with a PS Audio variable frequency mains power supply, and just upping the mains frequency by 5Hz to 55Hz noticeably lowered the buzz. Increasing the mains frequency to 60Hz eliminated it altogether. The 869 is definitely quieter than my old 859, but it's not totally silent. In terms of residual noise – an important factor for those sitting close to very sensitive speakers – the 869 is very quiet; with an ear pressed close to the H-Is a faint hiss could just be discerned. For what it's worth, the Papworth TVA-1 seems even quieter – though in most situations any difference will be purely academic. Speaking of the Papworth, it was interesting to go back to it again after having lived with the 869 for nearly two months.

Verdict? I think the EAR has it for spaciousness and sheer breadth/depth of soundstage; the 869 gives a 'bigger' more generous sort of presentation. Rather than being confined to speaker boundaries, the 869's soundstage seems to extend away from the speaker boxes so that images hang in the air. The Papworth, by comparison, sounds leaner and a shade more forward, with an impressive immediacy and attack in place of the EAR's relaxed openness. The sharpness of the Papworth makes it seem more purposeful and articulate. Tonally the impression is still one of refinement and smoothness, yet dynamically it sounds more keyed up – lucid, abrupt, and ready to snap shut like a tightly coiled spring. In this

respect, the TVA-1 is perhaps closer subjectively to a good transistor amplifier design, compared to the more mellifluous sonic presentation of the 869. It offers greater punch and crisp fast transient attack.

Power-wise, the Papworth runs out of steam before the EAR – at least that's my subjective impression



– partly because the latter clips so graciously you're hardly aware of its power boundaries. It's almost impossible to 'clip' the 869; even pushed beyond its limits, it retains a remarkable sense of poise that disguises any strain it might be under. Some big amplifiers achieve this by having power to spare, the 869 does so by sheer quality.

Which of the two amps is best? I was afraid you were going to ask that... It's a close call, and one that might go either way depending on taste and priorities. In tight situations I always ask – if you couldn't live with one, could you live with the other? Answer? No! I could live happily with either. Even so, I have to admit a preference for the EAR. It has something very rare; the ability to liberate reproduced music from the shackles that normally limit it...

For recordings of classical music, I like the extra refinement of the 869; the way it makes the speakers 'disappear' as sound sources. There's an effortless natural quality about the EAR that's very seductive. That said, the added brilliance and bite of the Papworth makes for

exciting listening. I love the way it focuses the music – and your attention. It's commanding and engaging. As remarked earlier, it's a tough call between two outstanding designs. The 869 costs more – a shade under £2,300 – so that might swing things in favour of the Papworth. But the EAR offers excellent value – both in terms of build quality and outstanding sonics. It's

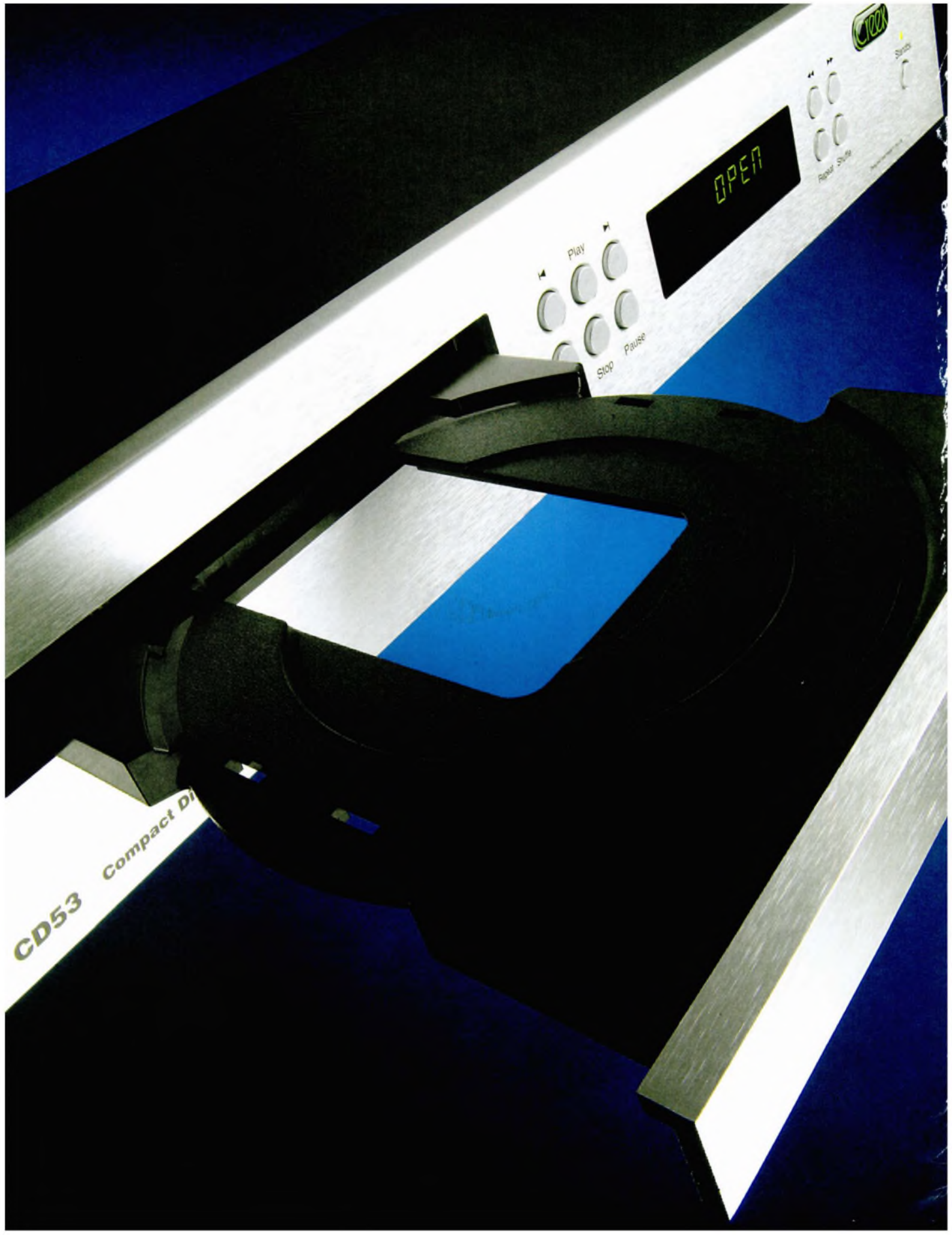
reliable too; my 859 is living proof of that. Buy an 869 and hopefully you can look forward to years of consistent trouble-free use without needing to replace valves. It'll maintain its long-term place in your system on merit too; once you get a feel for its sound, and the almost magical way it brings out subtleties of phrasing and tonal allure, you'll realise how few amplifiers at any price offer better sound. Louder? – yes. Bigger? – possibly. Flashier and more chromium plated? – definitely. But truer, and as natural and realistic? – I very much doubt it. The EAR 869 is amplifier to settle down with – your long-term partner. Till death us do part... ▶+

TECHNICAL SPECIFICATIONS

Type:	Line Integrated Amplifier
Inputs:	5 Line
Input Impedance:	50K
Outputs:	1 tape
Output Power:	15 watts
Valve Complement:	4x PCC88 2x EL519
Dimensions (WxHxD):	390x175x405mm
Weight:	21kg
Price:	£2298

Manufacturer:

EAR/Yoshino Ltd
Tel. (44)(0) 1223-208877
E-mail. earyoshino@aol.com
Net. www.ear-yoshino.com



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CD53 Compact Disc

The Real Deal Creek CD53 CD Player

by Jason Hector

In the last issue I reviewed the very impressive Creek 5350SE integrated amplifier. As I said then this amplifier is pitched into a super competitive market place but managed to have enough personality and quality to more than hold its own against the competition. The matching Creek CD53 CD player will also be entering a similarly competitive market segment where it will be up against similar competition to its integrated amplifier stable mate. Priced at £1199 it goes head to head with the Naim CD5 and is about two hundred pounds more expensive than one of the other players I enjoy, the Rega Jupiter.

So how does this player justify the price tag? Mainly with a very persuasive musical performance, especially when partnering the 5350SE amplifier. At the risk of giving away the ending I would say these two are the best combination I have heard at this price point. You are just going to have to wait before I justify that statement while I fill you in on the specification of the CD53.

This player is not as physically impressive as the amplifier, the thick front plate is still here and the solid aluminium box is similar to the 5350SE's, so far so good. But the switch gear and the drawer just slightly let the side down. Its not that they are really bad it's just next to the amplifiers superlative build the CD53 is slightly disappointing. The amplifier and CD player do look good together in a rack if that is important to you. I guess these design issues can at least partly be

explained by the innards of the player, because this is where the money has obviously gone and a good thing too. The transport is a Philips CDM12 mechanism, controlled by custom designed software, a common trick with this transport and one that can yield surprisingly large rewards over using the supplied control algorithms. Digital to analogue conversion is carried out by a Crystal semiconductor delta-sigma DAC running at 24 bit and 192kHz. The analogue filtering is



achieved with fully balanced circuitry which Creek claim gives "sound quality ahead of much higher priced CD players", while a customised ultra low jitter master clock and extra circuitry to reduce jitter from the digital signal processor ensure that the bits arrive and importantly that they arrive on-time. There are two digital outputs onco-axial and the other optical. These have been re-clocked for low jitter and transformer coupled which will usually mean a good connection to an outboard device without the risk of ground plane induced noise wrecking the data transfer. Creek obviously feel that things may change in the digital area and that an upgrade path should be open. To enable this the D to A converter, high quality master clock generator, jitter reduction circuitry and regulated power

supplies are mounted on separate boards to allow upgrading at a later date if (or rather when) technology has moved on.

Over the years quite a few companies have realised the importance of proper power supply architectures in CD players to ensure good sound. Keeping the noisy digital section isolated from the delicate analogue should yield rewards in noise performance and musicality. Creek have obviously spent considerable time here. In the CD53 we have two 'grain-oriented steel' mains transformers, these are coupled, via smoothing capacitors to two separate power supplies for the digital and analogue sections.

Front panel controls consist of a few more than the usual suspects and of course their numbers are further fleshed out by a full feature, anonymous, remote control handset which uses the common RC5 command set. Mains input is through a fused IEC mains inlet so power cable experimentation is easy and worthwhile. I found positive and worthwhile performance changes with a MusicWorks mains lead in place of the supplied cable. Gold plated Phono/RCA's for the (un-balanced) analogue output are joined by balanced outputs via two professional 3 pin XLR sockets, it is very unusual to find balanced outputs on a player in this price bracket. I was not able to test the sound quality using them, as I do not have any balanced gear! Future Creek

▶ products, specifically a new pre-amplifier, will have balanced inputs. If you can make use of the balanced inputs you might get an even better sound from this player than I did, especially if you need long interconnect runs.

Much of my time with this player was spent with it playing through the 5350SE amplifier with only checks and balances being carried out through



my usual main system. I obviously needed to get an idea of the performance envelope and make sure that the 5350SE was not flattering the player too much. I found myself playing a really wide variety of music through the Creek pairing in the four months I had access to it. I won't try to fully list the discs I played and you can check the 5350SE review in the last issue for more of the titles. The overall sound from the CD53 was pretty consistent across the range displaying a full and rich sound balance that was particularly suited to acoustic music.

The particular area of excellence which really puts this player (especially when partnered with the 5350SE) to the top of the pile in its price bracket is its ability in integrating musical strands and make sense of rhythms. Playing Dead Can Dance – *A Passage In Time* (most bands might describe this as a best of) we can compare the various

stages of this bands evolution and the wide range of “historical” music influences they have drawn on. Of particular interest is the way the CD53 always manages to deliver a musical presentation and the interleaving melodies and tunes of Dead can Dance songs are never lost even when the complexity increases as a song moves toward a climax. This results in a very enjoyable player that keeps you interested. During the time I was listening to this pairing

I heard a serious system from another brand

(5 times the price!) and was shocked at how poorly that system was able to hold the listeners interest. I put this down to a lack of suspense in the music especially compared to the Creek. What do I mean by that? Well take Abra Moore's *Live from the strangest places* mini album (5 mostly acoustic tracks a little harshly recorded but a very powerful piece nonetheless) and the tension built between the themes of the songs. With the Creek pairing the music produced by this excellent singer/songwriter keeps you on an emotional edge as the energy builds, the result is exciting just as music should be. If you want a soporific system to play music to drink your Cocoa by, look elsewhere! Simply put this player and amplifier can excite. Some seem to think that

a system that has integration must be low resolution. This is obviously nonsense. But finding a player that is so capable of correctly maintaining musicality while getting so much of the information off of the disk is rare at this price point. The Creek did not overly cosset poor recordings, that said it did not lay all threads bare. A large part of detail retrieval for me is note shaping rather than hearing the third cellists belch and yet again the Creek was very convincing in this area.

If I had to pick one frequency area where the CD53/5350SE pairing really shine, it's in the midrange. The quality of vocals is seductive in the

extreme and I had to indulge in playing loads of female vocals like Natalie Merchant.

Her *Ophelia* album is a perennial favourite of mine and it's an album I keep coming back to. Natalie has a one of a kind voice able to pull your emotions with her at will. The CD53 resolved her voice

giving it no unwanted added emphasis just

allowing the beautiful performance to breath. To further aid the match to the amplifier the treble response is extended with plenty of information and it is well integrated to the midrange yielding a low fatigue sound. Cymbals, however, were a little splashy, lacking the full body portrayed by better but more expensive hardware. The tone of most instruments, strongly plucked guitar strings for example was accurately rendered and the harmonic richness of the guitar was there in abundance giving a natural sound and a live sound. The various elements of recordings had plenty of space and there was a lack of congestion with lyrics easily

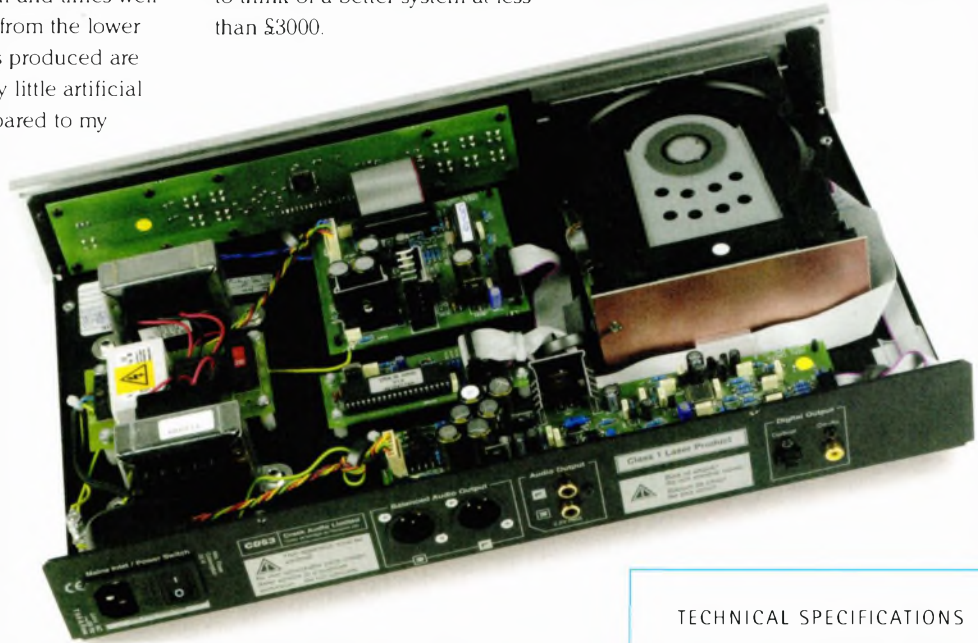
▷ intelligible. For those of you worried about such things the CD53/5350SE pairing was able to cast a wide and deep if slightly diffuse and unfocused soundstage, this diffuse quality more apparent with the CD53 playing through the 5350SE than my own amplification, implying that the amplifier is partly to blame.

The weakness of this CD player is in its bass reproduction. What bass there is is very tuneful and times well across the full range from the lower mid down. The notes produced are well formed with very little artificial truncation. But compared to my own Micromega for example the Creek bass lacked some power and failed to underpin some tracks: it lacks absolute authority. A key test was *Merz – Merz*, which is an album with a distinctly Reggae feel and needs the satisfying grumbling of deep bass to work. Auditioning the CD53 through my main system the bass was lacking making the album hard to connect with. This deficiency is actually a definite advantage when the CD53 is partnered with the Creek 5350SE. In the review of the 5350SE I found that a powerful bass line like that in the Merz (ACDC's *Stiff Upper Lip* was another good example) could expose the amplifier if the speakers and source were strong in the bass. So the slight weakness of the CD53 is the perfect match to the 5350SE. Yes it is less than accurate and probably less superficially exciting, but the result is more music which is always a fair exchange in my book.

Bearing the strengths and weaknesses of these components in mind I would think about partnering

them with a good quality full range pair of speakers or you will miss a large part of the performance available. I found the Shahinian Starter or Compass a really good match in a higher price bracket as they made the most of the bass on offer and allow that midrange to breathe. Excellent results were also had with a pair of Royd RRI's and for a small lounge I would struggle to think of a better system at less than £3000.

description of what we are trying to achieve with our groups of components and what Michael Creek has achieved with the CD53 CD player and 5350SE integrated amplifier. Simply put, neither exposes the other and each plays to the others strengths, and as I said above, these two are the best combination I have heard at this price point. It makes their audition essential against the competition. ▷+



When thinking about this review I kept coming back to the strengths of these components as a system.

System: A group of interacting, interrelated, or interdependent elements forming a complex whole.

Balance: A harmonious or satisfying arrangement or proportion of parts or elements, as in a design.

So system Balance: A group of interacting elements forming a complex whole that is harmonious and satisfying.

The reason for quoting these definitions is that they are the perfect

TECHNICAL SPECIFICATIONS

Outputs (analogue):	1x single-ended phono 1x balanced XLR
Outputs (digital):	1x Co-axial 1x Toslink optical
Output impedance:	100 Ohm un-balanced
Output impedance:	200 Ohm balanced
Frequency Response	1Hz to 20kHz +/- 0.25 dB
Power consumption (Idling)	10W
Power consumption (max.)	20W
Size (WxHxD):	430x70x250mm
Price:	£1199

Manufacturer:

Creek Audio
Tel. (44)(0) 208-361-4133
Net. info@creekaudio.co.uk
Net. www.creekaudio.co.uk



LINN
LP12/SONDER

One Careful Owner...

Upgrade Options For Secondhand LP12s

by Roy Gregory

If you read the article in Issue 17 about buying a secondhand LP12 then maybe you've already been out and bought one (before the prices start to rise as a result of the increased levels of attention). Alternatively you might be one of those with an elderly Linn lying around that you've decided to put back into your system. Either way, you're in possession of one of the great hi-fi bargains of all time. The level of performance (and longevity) you get from an ageing LP12 is remarkable when compared with the cost of ownership and upkeep. Where we left you last time was with a firm recommendation to have the deck serviced by a knowledgeable dealer, meaning one who dealt with the turntable in its heyday. The problem is that entering a hi-fi shop is always dangerous (to your wallet) and never more so than when you're clutching an LP12 that's clearly in need of some attention. But, like so often in hi-fi, the danger comes from within. The dealer is going to make you aware of the available upgrades, and if he doesn't then you'll probably ask. You see, the problem is that there seems to be a natural tendency to look at a bargain in terms in money saved, and money saved in terms of money still available to spend. Human nature being what it is, no sooner have we secured a bargain than we want to lavish extra funds on it with a view to further improving its performance. I guess that's just the way we are.

Of course, once upon a time you listened to the LP12 at a Linn dealers,

and that's where you had it serviced and upgraded. There was only one true path, and you strayed from it at your peril. With the arrival of CD (and the Linn/Naim rift) that cosy situation started to crumble, a realisation that really started with the arrival of the Pink Linnk, a top-plate and motor position modification kit. Whilst it hardly swept the world, Pink's upgrade signalled the first cracks in the ideological edifice that had been the LP12. Suddenly it was okay to consider both that the LP12 might be capable of improvement and that outside agencies might have a valid view on the subject. Now, there are a whole host of modifications available for the LP12 and its associated paraphernalia, making for a situation that's confusing at best.

So, should you get your deck upgraded? There's absolutely no question that the modifications and updates we're examining here represent genuine performance upgrades (and that's not always the case), but that doesn't necessarily mean that you should indulge.

It all depends why you bought the deck in the first place. If it was to get great vinyl replay on the cheap then I'd resist the upgrade temptation at least for a while, allowing you to enjoy your bargain purchase and bask in your buying acumen.

You can always upgrade the deck later. However, knowing that this is a bit like giving my nieces a quarter of bon-bons and then telling them not to eat them all, I guess we ought to provide at least some basic guidance as to what the various upgrade options provide.

There are three main upgrade paths available to the LP12 owner, and it's these we'll consider here. Unfortunately, there are so many different permutations within these paths that hard and fast recommendations regarding each individual step are difficult to impossible to make. Instead, what we did was assemble the ultimate incarnation of each approach and then listen to them. The cast then is as follows.

The Linn LP12-Lingo with Ekos tonearm and Archiv B cartridge

The Lingo represents the top of the current Linn range, consisting of the basic motor



▶ unit driven by a sophisticated off-board power supply. This comes in one of Linn's standard midi-sized cases, runs from a switch-mode power supply, and (finally) allows the user to select 33 and 45 via the deck's power switch. The narrow board you'll see in the photos is a legacy of the original half width casework, but this was changed to provide visual continuity for all those people with Linn

striking black, camera finish, while the cartridge was the latest version of the Archiv, the Archiv B, sourced from Scantech/Lyra. The deck, supplied and set-up by Sound Gallery of High Wycombe, was also fitted with a Trampolinn isolation base, although Chris Gildersleve pointed out that this wouldn't necessarily be the case for a customer's deck and would depend upon the support provided.

The rest of the deck's internals were covered in some detail in the last issue so I won't repeat it all here. Needless to say, mechanically speaking the deck was totally up to date and arrived in a strikingly attractive solid cherry plinth – itself a vast improvement over the ubiquitous afromosia of yester-year.

The Naim Armageddon PSU, Arro tonearm and Lyra Helikon SL cartridge

Naim's Armageddon power supply basically consists of the phase splitter from the original deck, fed from a massive isolation transformer designed specifically to provide a low impedance source for the motor. Whilst there's nothing terribly sophisticated about this approach, it does constitute sound engineering practice, and as with most things

Naim, the execution is excellent. The Armageddon supply is applicable to decks of any vintage, although it will replace all existing power supply arrangements, such as Valhalla boards.



The Arro arm (so named for the aluminium arrow shaft used for the armtube) is another piece of traditional engineering, albeit with a few hidden wrinkles. The Arro's secret lies in the bearing shaft arrangement. This employs an outer sleeve to support the actual bearing shaft itself, which is mechanically grounded onto a ball bearing. A small amount of fluid provides mechanical damping. The top of the shaft is machined into a shallow dish in which sits the Sapphire pivot.



The arm wiring terminates in a multi-pin micro socket mounted in the armboard just in front of the bearing housing. This means that the entire arm assembly can be removed and readily swapped should you want to run more than one cartridge (although VTA will require adjustment). Operational

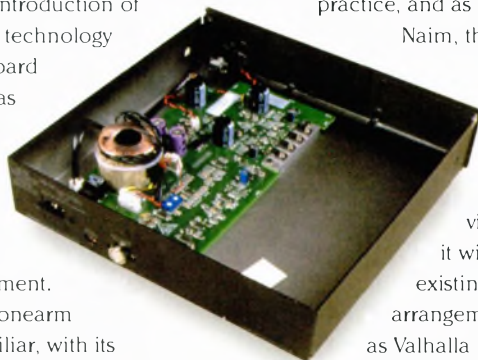


separates systems. The circuit itself relies on a pair of low noise crystal oscillators to drive each phase of the motor independently. It also provides filtering and isolation



between the supply and the mains – in both directions. A recent change is the introduction of surface mount technology to the Lingo board which as well as production benefits also introduces a worthwhile sonic improvement.

The Ekos tonearm should be familiar, with its

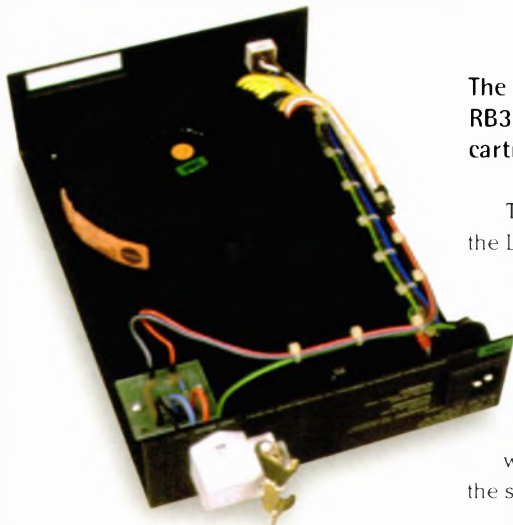


► peculiarities include the lack of a cueing device as well as the absence of any adjustment for overhang, although I slotted headshells can be supplied to special order. The purchase price also includes a Linn supplied LP12 armboard which takes care of the



unusual drilling requirements for the armrest and micro socket.

Cartridge was the Lyra Helikon SL reviewed so positively by CB and now resident in his own LP12/Ekos. This special version of the standard Helikon was requested by Naim's distributor in North America, who was unhappy with the performance of the standard Helikon into Naim's phono-stages. It uses a single layer of coil windings and as a result offers a lower output than the



standard version.

In its ultimate guise, the Armageddoned LP12 would also include a pre-fix phono-stage mounted within the plinth. In an effort to try and keep the field as level as possible, and bearing in mind that it's the turntable we're supposed to be listening too, we used the deck on its own. In fact, each of these

turntables does have a matching phono-stage for those who wish it, although only the Pre-fix actually sits within the plinth. The deck we used for the listening tests is the personal player of Phil March from Phonography, and was fitted with a tonearm lead carrying phono plugs rather than the BNCs he normally uses. Again, this is a standard option available from Naim.



The Torlyte LP12, Rega RB300 tonearm and Linn Archiv cartridge

This approach to upgrading the Linn comes from Russ Andrews.

Perhaps not surprisingly (given its progenitor's reputation) the Torlyte LP12 is by far the most radical rebuild, although it is available in stages, so you don't necessarily have to go the whole hog. It starts by replacing the sub-chassis and armboard with



versions constructed from Torlyte wood honeycomb matrix. One important change here is that the armboard is bolted through to the sub-chassis rather than employing the lossy, three screw coupling of the original design. This increase in rigidity is also mirrored in the bearing mounting. The main bearing is glued into what amounts to a sleeve through the now 30mm thick sub-chassis.

In order to keep the overall height of the deck within the norm, the spring assemblies are mounted in wells.

The next step is to replace the hardwood plinth with an alternative constructed from Torlyte. This is slightly larger overall than the standard item, meaning that the front of the lid is now spaced back from the front edge of the deck. Aesthetically the Torlyte item ►

The music used...

'Shake It Baby' from the John Lee Hooker album *It Serve You Right To Suffer*
'Blues In Hoss' Flat' from Count Basie, *Chairman Of The Board*
Dvorak *Cello Concerto* with Piatigorsky, Munch and the BSO
'Change Your Mind' from Neil Young's album *Sleeps With Angels*
Dvorak String Quintet Op.77, the Philharmonia Ensemble, Frankfurt
'Way Out Basie' from the Count Basie album *Farmers Market Barbeque*
The *Tallis Fantasia* from Barbirolli/New Philharmonia *English String Music*

The Listeners

As well as myself, we used four sets of ears:

Phil March



Phil is the founder of Phonography and host for our listening sessions. He is a long time Naim dealer, and first started selling LP12s from Phil March Audio Systems in Hull, back in 1984. He currently offers the Armageddon/Arro set-up to his customers and is a dab hand at all things LP12. When I asked him what he uses at home his first response was "Four guitars and a piano!" but when pressed admitted to the LP12/Armageddon Arro we were listening too, carrying a Dynavec

DV17D2, feeding a Naim 52/250 and a pair of Shahinians.

Phonography

Tel. 01425-461230

Chris Gildersleve



Chris is owner of High Wycombe dealer The Sound Gallery, which he opened in 1985. He has sold both Linn and Naim equipment from day one, and is unusual in selling in-car systems too. He also does a huge amount of A/V and multi-room business and is one of the few dealers who seems able to reconcile the various demands of serious hi-fi and the newer emerging market areas. At home he listens to a full blown Linn Lingo with Ekos and Archiv B, through a Naim 52/500 set-up, driving B&W 802s. His CD player is the Linn CD12.

The Sound Gallery

Tel. 01494-531682

E-mail. sales@soundgallery.co.uk

Net. www.soundgallery.co.uk

Russ Andrews

Russ was there when it all started with Ariston, opening his first shop in Edinburgh in 1970. Never one to shy away from slaughtering sacred cows he doesn't just offer modifications to the LP12 but alternative cable looms for Naim



systems too. As you can see, he bestows his favours even handedly. He has been a long time champion of home build hi-fi and encourages customers to pay the sort of attention to basic set-up which dealers seem increasingly reluctant to provide. His current crusade headlines with the mains but there's little if anything in a hi-fi system that Russ doesn't feel he can improve. My experience suggests that he might well be right!

At home he listens to a Torlyte modified Sota Star Sapphire, SME 5 and Monster Alpha Genesis 2000 playing through his own active set-up.

Russ Andrews Accessories

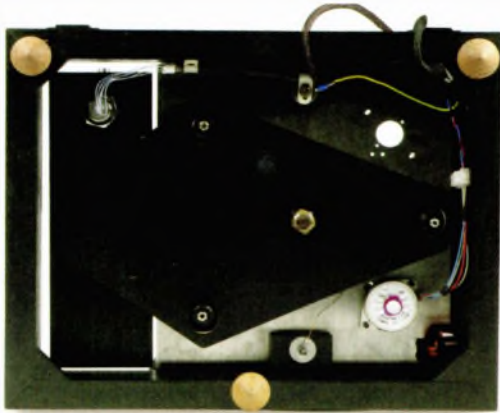
Tel. 0800-373467 or (44)(0)1539-825500

E-mail. products@russandrews.com

Net. www.russandrews.com

Simon Marsh

Simon is our photographer and is responsible for the pictures you see in Hi-fi Plus. He's also a serious listener and uses an LP12 Lingo/Ekos and Lyra Helikon to feed a Groove, Orca, Alecto set-up, driving Impulse speakers and a REL sub. His CD player is a Wadia transport driving a Trichord DAC. Anybody wishing to take advantage of his photographic skills is welcome to contact him through the magazine office at the number on the masthead.



▶ also lacks some of the obvious appeal of the original, but beauty is in the eye of the beholder so I shan't labour this point.

Next, Russ removes the Valhalla board (assuming one has been fitted), modifies it and puts it in an outboard box. The next, and in some ways most shocking change comes when he repositions the motor by 90 degrees. This places it in the same position as the Pink Linnk, the purpose being to locate it perpendicular to the travel of the arm. This means that any uneven tension in the belt, a situation that's inherent with synchronous motors, can't present a side force to the cartridge and thus won't effect the sound. However, unlike the Pink approach, Russ simply re-drills the existing top plate. This makes the modification extremely cost effective, but does leave the old mounting holes, although these are hidden by the platter when the deck is in use.

The deck Russ brought along for our comparisons was kitted out with an RB300 tonearm, rewired from its base with a Kimber TAK-H tonearm cable, and mounting an original Linn Archiv cartridge. Whilst the LP12/Rega combination was originally frowned on, the increased rigidity in the sub-chassis and armboard assembly eliminates

the compatibility issues, while the re-wiring releases the tonearm's potential. The deck was also mounted on a Torlyte turntable stand, although Russ's own version is black whereas current production is in a natural beech finish. Never mind, at least it matched the plinth. The whole kit and caboodle was run from one of Russ's Classic power cords. Just to take things the final step, Russ also



supplies a set of set-up instructions for the LP12. This act of heresy is sure to be severely punished, whether he achieves Nirvana or Valhalla, but for isolated users devoid of decent dealer support, it's clear, no-nonsense explanation comes as an absolute boon. However, remember that as far as the LP12 goes, experience is everything, and the contribution of a good dealer will easily exceed the value of what he charges you to set your deck up. So, good emergency medical aid but no substitute for a proper hospital.

How the test was done...

For the purposes of the listening

tests we borrowed the main dem room at Phonography in Ringwood, where the cast of thousands duly assembled. The decks were placed on Quadraspire racks (apart from the Torlyte deck that used its own stand and cables) and fed with from the shop's standard Music Works mains cables. They were positioned so that the listeners couldn't see which deck was being played at any one time.

Phono-stage employed was The Groove and this fed the Levinson 383, selected for its

precisely adjustable volume control, allowing us to set repeatable levels for each deck. Of course, with different arms and cartridges on each, purists could argue that we aren't comparing the decks at all, and in truth we aren't. What we are interested in is the different results obtained from the three different approaches, and the chosen tonearms are an inherent part of each upgrade path. Likewise, the cartridges are all different, but they are also (at least in the case of Linn and Naim) their recommended partners for the deck. They also all derive from Scantech, which makes them first cousins at the very least. The Archiv on the Torlyte deck was a happy accident: it just happened to be what was on the deck when Russ bought it secondhand.

I also had a standard Helikon



▶ on hand, but Russ was happy to proceed with the deck as it was, so we did. Speakers used were the Shahinian Arcs and cabling was the Townshend Isolde.

The listening itself was divided into two sessions, each consisting of blind listening to the three decks, with one chosen at random as a control. In each case we played an excerpt from either a pop, classical or jazz album on each deck in turn, the playing order varying between the two sessions. In the afternoon we actually ended up with a fourth track by request (thank you Phil). Special thanks go to Richard Wilson from Sound Gallery for his help in actually running the listening sessions.

How the decks sound

The first thing you need to know about the sound of these decks is that they are each quite distinctive. Distinctive enough to identify with some certainty in the blind listening tests. There's no confusing them.

The second is that different tracks actually effected the scoring, with certain tracks playing to one deck's strengths at the expense of the others.

The third is that no clear favourite emerged, with each deck having its advocates. Perhaps more interestingly, these preferences didn't follow 'party lines', even though the various decks could actually be readily recognised.

On to the specifics:

The LP12/Lingo was characterised



by its big, bold and slightly forward presentation. It tended to make the music sound fast and dynamic, with a slightly driven character, a quality that particularly suited 'Way Out Basie', where it gave the loping rhythm a purposeful stride. At the other extreme it hurried the opening to the Tallis Fantasia, destroying the tension in the hanging notes, and tended to exaggerate surface noise. Likewise, the recessed basses on their riser sounded lumpy and detached as well as being pushed forward into the soundstage. However, voices in particular were articulate and well separated. This deck was markedly preferred by Simon (who uses one at home and was relieved to discover that the threat of imminent expenditure had receded) although both Phil and Chris commented on its lack of overall integration and the possibility of long term fatigue. But the one thing that everyone agreed on was its sense of scale and impact. In many ways it was the liveliest of the three decks and the most impressive, if

not ultimately the most refined.

The Torlyte modified deck was the polar opposite of the Lingo. Characterised by an easy, open and unforced presentation, it offered superior rhythmic sophistication and integrity, and its more distant soundstage possessed much greater depth. These qualities really shone on the Tallis, with a lovely sense of air and growing tension. The

music was allowed to breathe properly and find its own sense of pace, making the Lingo sound cluttered in comparison. However, both Simon and Chris commented on a smoothness and slight lack of top end sparkle, feeling that the deck lacked a bit of bite and attack. Certainly, its musical style is far more laid back than the Lingo's. So one person's relaxed and engaging risks being another's torpid. What's new? What was clear is that the Torlyte mods

do make for a far more linear and



controlled sounding deck, which is at once more tonally neutral and rhythmically articulate. None of which is particularly surprising given the physical nature of the materials employed in the two different approaches.

Which brings us to the Armageddon, and a half way house between the two extremes, ▶

▶ albeit, one that leans more towards the Torlyte than the Lingo. The Naim deck possesses much of the rhythmic quality and expression of the Torlyte, but combined with a slightly more dynamic and colourful style. Its stereo performance was far closer to the Lingo's, although its soundstage was both deeper and not as forward. But like the Lingo it lacked the transparency and stability of the Torlyte. It repeatedly gained praise for its smooth sound although occasionally that tipped over into a loss of interest, particularly from Chris and Simon. It certainly seems to offer more of the Linn's traditional virtues than the Lingo, combined with much of the delicacy and detail of the Torlyte. At the same time it lacks the latter's overall coherence and

musical sophistication, as well as the former's sheer energy and vitality. It really is a middle path.

Which brings us to the conclusions. In many ways the most fascinating aspect was the differences between these decks when it came to the fundamental structure of the music. Rhythmic integrity, soundstage stability and overall coherence were all completely different in each case, and these are things that relate specifically to the turntable as opposed to the arm and cartridge. The decks provide the foundations for the music and thus define its ultimate shape. The fact that we got three such different presentations can only be good news when it comes to choosing an upgrade path. Individual characteristics

can be refined through choice of arm and cartridge, but at least you know which direction to head in. As to which of the decks our listeners ultimately preferred? Judging from the scores on their response sheets Simon opted for the Lingo, Chris was torn between the Armageddon and the Torlyte, Phil opted for the Torlyte and so did I. Russ? Well he too chose the Torlyte, but then he would wouldn't he, although he admitted a secret liking for the Armageddon. So honours ended about even, allowing your preferences to make the choice of approach, which has to be preferable to choosing the 'better' deck even if, ultimately you don't enjoy it as much. You see, occasionally even hi-fi makes sense!



Prices and Contact Information

Linn Products Ltd
Tel. (44)(0)141-307-7777
Net. www.linn.co.uk

Upgrade to Lingo PSU	£750
Cirkus Kit	£300
Linn Ekos Tonearm	£1600
Linn Archiv B	£1200

Naim Audio
Tel. (44)(0)1722-332266
Net. www.naim-audio.com

Armageddon kit	£695
Pre-fix phono stage	£450
Arro Tonearm	£1359

Russ Andrews Accessories
Tel. (44)(0)1539-825500
Net. www.russandrews.com

Torlyte sub-chassis kit	£499
Torlyte plinth	£299
Motor relocation kit	£75
Valhalla modification kit and case	£250
Torlyte stand	£630
Kimber Kable lead for Rega RB300	£525
Labour to complete above modification if carried out by Russ Andrews	£750

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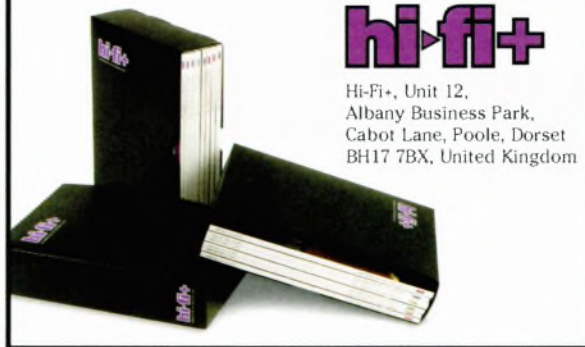
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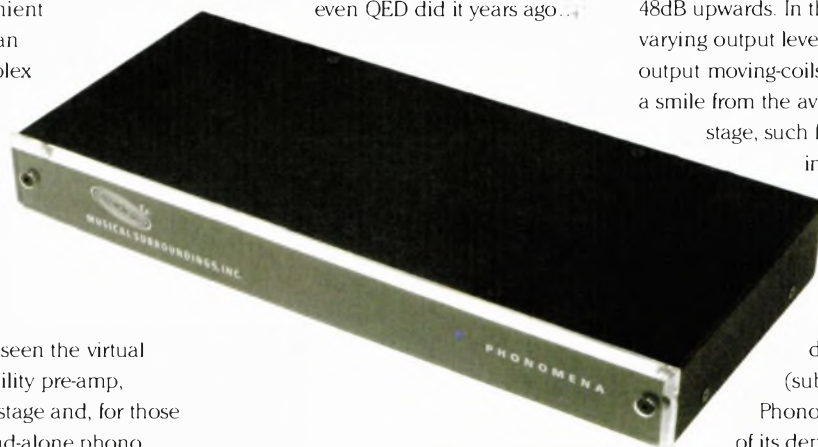
Phonomena Phono Stage and Battery Power Supply

by Roy Gregory

Battery power has been a part of pre-amps almost as long as I can remember, promising independence from the mains and the noise that arrives on their coat tails. The original DNM was an early object of lust (once I was old enough to earn real money!) and Pink Triangle, Roland and LFD all followed this path. But running a pre-amp requires an inconvenient number of cells, or an inconveniently complex arrangement, as numbers of frustrated Pip owners could testify, having found themselves 'locked out' of their expensive pre-amps.

Passing time has seen the virtual demise of the full facility pre-amp, replaced by the line stage and, for those who want one, a stand-alone phono stage. The lower power requirements of these latter devices make them a natural application for battery supplies and sure enough, LFD and more recently Final Music have both offered such products. Of course, by now you'll have noticed that all the above mentioned units are solid-state. The voltages required for valves (let alone the gain and noise performance required of them) rule them out of this particular equation. You'll also have noticed that they tend to the expensive and eclectic. However, given the rise and rise of op-amp technology and its promise of affordable, low-noise, high-quality gain, it's hardly surprising that the broad middle ground of the phono stage

marketplace is dominated by such devices, offering levels of performance that not so long ago most of us could only dream of. The trickle that started with the Michell Iso has become an avalanche. It was only a matter of time before some enterprising individual applied battery power to their particular take on the recipe. After all, Lentek and even QED did it years ago...



The Phonomena Phono Stage

Enter then, US high-end distributor Musical Surroundings and the cunningly named Phonomena. It's a slim, rather neatly styled unit graced by a bevelled perspex front panel. Its original design brief called for its placement between the feet of the Basis 1400 turntable, distributed by the parent company. That gives you some idea of just how slim it is, as well as the level of shielding the casework offers to the circuitry! In standard form, and true to form, it offers rear panel phono in and outputs along with an earth post and a five pin din socket for the external moulded plug-top power supply.

But there's more to the Phonomena than meets the eye. For starters, it's adjustable, and I mean fully adjustable. Internal dip switches allow the user to vary overall gain between 40 and 60dB, encompassing both moving-magnet and moving-coil cartridges. What's more, that range embraces no fewer than 13 discrete steps, ten of them ranging from 48dB upwards. In these days of wildly varying output levels and so-called high output moving-coils that will barely raise a smile from the average moving-magnet stage, such flexibility is welcome

indeed. The overall gain should be sufficient for all but the lowest output Ortofon and Tubaphon designs and their like (sub 0.175mV), but the

Phonomena would be out of its depth in such company anyway. As such it would be pointless forcing the noise and gain envelope to the sonic detriment of the whole, which looks like a good call on the part of the designer.

Perhaps not surprisingly, given the above, loading is also micro adjustable, between 30 Ohms and 100 KOhms. Again, the finer discrimination sensibly leans to the lower end of the scale, with 13 discrete values spread between 30 and 660 Ohms. Thankfully, there's also a single dip switch devoted to capacitive loading, allowing the user to choose between 200 and 300pF values. Whilst this adjustment is largely irrelevant to moving-coils it can be vital with the newly resurgent magnets and is all

▶ too often overlooked in what are supposed to be universal designs. Inside, everything is pretty much as you'd expect, although layouts and labelling are rather neater than normal, an attention to detail that extends to the extremely clear and concise instruction manual.

I used the Phomena with both the Clearlight Recovery and the excellent Kuzma Stabi Reference turntables, carrying either JMW 12.5 or Tri-planar tonearms. Cartridges ran the range from the Lyra Heikou and Koetsu Red K Signature to the latest (and further improved) version of the Cartridgeman Music Maker. Investigating the lower limits of the gain band, I also rooted out my original Transfiguration which manages about 0.23mV, but found noise levels via the Hovland line stage intrusive (and they're not something I'm particularly critical about). This will vary depending on the gain and noise performance of partnering equipment, so if you intend to employ the Phomena with one of the lower output designs then check this out in your own set-up before you buy.

Back with either the Koetsu or the Lyra that I used for most of the listening, gain was ample and background noise very low. Which deals with the technical aspects of performance: What about the musical? Competition at this price level is limited, most units being priced closer to the £400 or £800 marks. That could work against the Phomena, but in practice the opposite occurs with the American import easily bettering the cheaper units and meeting the more expensive ones head on. Its sound is characterised by a sense of poise and balance with natural tonal colours and perspectives. What coloration it suffers is subtractive, robbing instruments of a little body and colour rather than imposing a character of its own. It also

lacks some transparency, but if you're going to err (and what product at this price doesn't?) then this is the way to go. The result is engaging music that retains its communicative qualities and overall shape. The Micro Groove by way of comparison, offers greater focus, detail and transparency, but lacks the Phomena's overall coherence and easy musical accessibility. Long term there's no question which is the more rewarding, if initially less obviously impressive.



Listening to *Tea For The Tillerman* (Island 842 352 – 1) revealed a slight rounding to the sound and a lack of dynamic heft and discrimination, but these are absolute judgements in comparison to far more expensive units, and in no way interfered with my enjoyment of this familiar album. The guitars were nicely differentiated and placed, the voice instantly recognisable. Likewise the music had the nice sense of rhythmic progression, shape and purpose this record demands. The colour, substance and shape of the presentation was excellent, really working to the advantage of acoustic recordings, especially smaller scale classical works.

But, be warned that you can't just plug in and play this unit and expect to achieve these results. Careful balancing of loading and gain is essential to maximising the potential of your system. In the case of the Koetsu, reducing the gain from 60 to 59.4dB proved

decisive when coupled to a loading of 660 Ohms. Lower loadings produced a pinched and small sound, with added focus and definition but robbed of colour and life. Fixing on the correct loading/gain combination added significant body, space and dynamic coherence, allowing the system to scale dynamic peaks far more comfortably and with far less apparent strain.

The importance of this should not be underestimated. The difference between having these values spot on and roughly in the right ballpark was enormous when viewed from the perspective of musical satisfaction. How big?

The difference between a nice hi-fi and an engaging system that holds your attention and draws you in, making you play one record after another, late into the night. The ability to optimise the performance and matching of your phono stage to both your system and cartridge is a trump card in the context of competing units. Get it right (which is far from difficult) and the Phomena sets new standards at its price, especially if you like to run more than one cartridge. It isn't the most impressively dynamic or transparently hi-fi phono stage for less than a thousand pounds, but it is the most musically natural and enjoyable that I've used. As such it establishes a new benchmark, not just on the basis of its performance, but on the basis that users will actually realise that performance in virtually all cases. Versatile and remarkably insensitive to placement it is the antithesis of the ultra tweaky image that dogs specialist phono stages. It works (faultlessly), it entertains (lavishly) and I welcome its arrival (enthusiastically). ▶

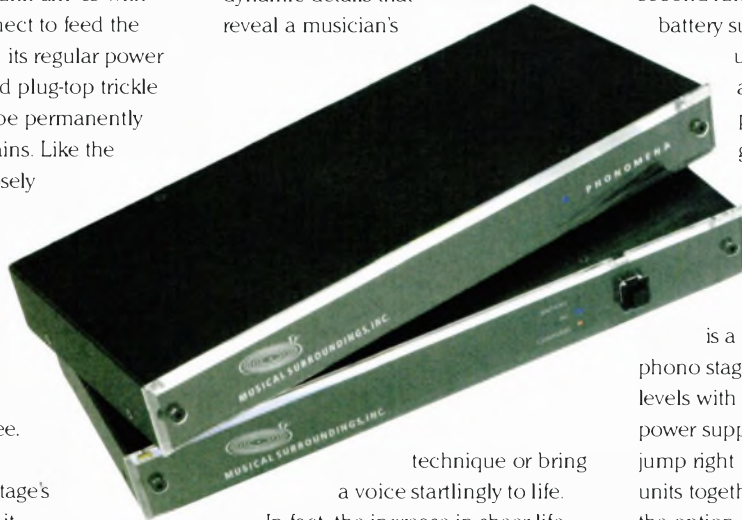
▶ Another layer of icing on the cake... Adding the Battery Power Supply

The Phenomena's matching battery supply is exactly that. Built into an identical slimline case, it differs only in offering a front panel switch that allows you to switch between charging and driving modes, the status indicated with coloured LEDs. The unit arrives with a 5 pin din interconnect to feed the phono stage through its regular power input, and a moulded plug-top trickle charger that should be permanently connected to the mains. Like the phono stage it so closely resembles, it costs £600, which might seem a bit steep until you hear what it does.

In use, the unit proved totally fuss free. Simply connect it in place of the phono stage's plug-top supply. Give it a short while to charge and once the green LED stays lit when you press the status button, you're away. Having said that, being one of those neurotic types, once I'd made sure it was working I left it to charge fully while I was listening to the phono stage in standard guise. Which is just as well given the improvement its addition wrought. If I'd started off with the battery supply in circuit and then listened without it, I probably wouldn't have realised just how good the standard unit is!

But let's make no mistake! Adding the Battery Power Supply lifts the performance of the Phenomena to a whole new level. What it does is take the phono stage's existing sense of musical structure and balance and adds a huge dose of detail and organisational subtlety. The results are spectacular. You instantly gain transparency, focus and whole swathes

of low-level information. Dynamic discrimination and micro-dynamic speed and definition are dramatically improved, resulting in a more rhythmically sophisticated and expressive rendition that handles musical shape and sweep much more dramatically. Suddenly the performance is awash with the subtle tonal shades that separate instruments, the tiny dynamic details that reveal a musician's



technique or bring a voice startlingly to life. In fact, the increase in sheer life might fool you into concluding that the supply increases the unit's dynamic range. In one sense it does, by dropping the information and noise floor, but it does nothing at the other end of the scale. In fact, such is the performance of the battery powered Phenomena that it gives many much more expensive units a serious run for their money. But where it falls short of the very best (which start at twice the price, and more often at much more than that!) is in terms of real dynamic heft and authority and the richest of tonal palettes that goes with it. The battery supply adds tonal shading and dynamic discrimination, but it does it within the Phenomena's existing compass, which means *ff* rather than *fff*. If you just have to have the last word in dynamic range and jump then you'd better start saving. In the meantime, you'll be more than happy with the Phenomena – it really is that good.

Taking Stock

As I concluded earlier, in stock form, the performance and versatility of the Phenomena set new standards in the First Serious Phono Stage marketplace. In that context its extra cost over and above more basic units is easily justified, while it also allows it to seriously undermine the more expensive, second rung offerings. Adding the

battery supply unleashes the basic unit's full potential, delivering a dramatically superior performance. Twice as good? I'd have to say so, which provides an attractive congruity given that it doubles the price!

What we have here is a really good and affordable phono stage that can be lifted to new levels with the addition of the optional power supply. Of course, you could just jump right in at the top by buying both units together, but isn't it nice to have the option of buying just the standard set-up, or upgrading it later as funds allow, without being short changed in performance or cost terms. Like I've always said, the law of diminishing returns shouldn't apply to hi-fi. Not when you get it right!



Prices:	
Phenomena Phono Stage	£600
Battery Power Supply	£600

UK Distributor:
Audiofreaks
Tel. (44)(0)208-948-4153
Fax. (44)(0)208-948-4250
Net. info@audiofreaks.co.uk

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Back To Mono...

The Tivoli Audio Model One Radio

by Roy Gregory

Back in days of yore, you, your parents and even your parents' parents (depending on your age) grew up with a table radio. It provided the musical backdrop to everyday life, and for many of us sparked the first love that would grow into later, greater things. But look around the average house now and you'll find no sign of the lowly radio, replaced and disenfranchised by that miracle of modern technology and the digital age, the ghetto blaster.

These rounded off, pumped-up plastic, technological marvels are bigger than their forebears and far more complex: three or four wavebands, a CD player, stereo speakers, sometimes a recording option and more buttons and menus than you can shake a stick at. Of course, all those extra facilities cost. And equally obviously the great British public are going to be unwilling to foot the extra bill, expecting as they do, everything to stay the same price forever and ever Amen. You only have to compare the structural integrity and weight of the design

classic, Bakelite and valve Bush radio I grew up with (and that still resides in my brother's kitchen – he got there first, the swine) with the average contemporary competitor, all plastic housings,

it did when it was bought. Sadly, even Roberts, last refuge of the traditional table radio, have recently slipped from grace, plywood and leather replaced with plastic mouldings.

Which makes the arrival of the Tivoli Audio Model One Radio all the more amazing and welcome.

A reinvention of the KLH original from the sixties, and re-engineered

by Henry Kloss himself as the parting shot in an illustrious and unrelentingly creative career, it improves the breed whilst retaining those all important characteristics that made the original concept so successful. To that end, the Model One is simple, compact, versatile and, above all, mono!

Now, the benefits to be had from the first three of those are fairly self-evident. Simplicity makes for cost effective manufacturing and aids the pursuit of superior sonic performance. Compactness speaks for itself, and the ability to receive a decent range of stations is clearly necessary. But why the insistence



integrated circuits and PCBs. Then compare the sound quality. Sadly, the technological 'benefits' of the ghetto blaster simply can't compete in sonic terms, but then, built today, the Bush would cost a small fortune, or at least a sizeable chunk of a household's disposable income – just the way

▶ on mono? The reasons are actually both sensible and sound, if you'll excuse the pun. The Model One is both an AM and an FM device, and whilst FM is traditionally the home of stereo broadcasting, running it in mono relaxes the signal strength requirements whilst maintaining bandwidth. That's why your car radio defaults to mono in poor signal areas. Additionally of course running a single channel also means half the amplification, a single drive-unit, a smaller, more rigid and cheaper cabinet, and no phase

and very traditional rotary tuning control that is both clear and easy to use. The back panel offers a switch and socket for an external aerial (although I've not found it necessary to use it) and 3.5mm mini-jacks for line in, out and headphones. And that's your lot, apart from a deep but narrow reflex port located on the bottom of the cabinet. Power options are a straight mains lead, connected



the Archers or a play on Radio 4, classical concerts on 3, or any other kind of music on the plethora of alternative radio stations, the results are engaging, direct and communicative, sharing in fact, all the attributes of mono LPs that I've been rattling on about all this time. Where appropriate, music will have you gyrating round the kitchen, just the way you used to in your youth, while radio drama will really hold your attention. And if you're still in doubt let me just point out that no other product received by this magazine has caused such an undignified squabble amongst the reviewing staff. Still, being the editor does have some advantages! The only thing I miss is Long Wave, but then I don't suppose Henry ever listened to Test Match Special

But I've kept the best for last. At close to a hundred pounds, the Tivoli might seem expensive at first sight. That's until you hear it. Then you realise that having bought it, everything else comes free. As a way of enjoying diverse and surprising new music you might not otherwise have discovered, the Model One is second to none. The rear panel socketry opens the options of a second cabinet containing just an amp and speaker, and a matching external source such as a CD player, and these are in the pipeline. But for me that's missing the point and undermining the Tivoli's essential simplicity: It is what it is, and every home should have one. ▶+

Price:	£100
UK Distributor:	Ruark Acoustics Ltd
	Tel. (44)(0)1702-601410

with a figure-eight plug, or a 12-16V DC option for use in portable type situations. It's the nearest thing you'll ever get to plug and play.

Once you've exhausted the set up options, which are pretty much limited to selecting where you place it, the only thing left to do is listen – and be amazed by the sound quality on offer. The analogue tuning is positive and precise, the LED telltale usefully sensitive. I could give you the full breakdown, discussed in terms of the range of tonal colour, the impressive and lively dynamics and surprising signal to noise ratio, but that's missing the point. Whether you listen to talk shows,

or matching issues. It all adds up to a powerful argument, but you've still got to get the execution right.

The Tivoli is surprisingly small at 210 x 115 x 133mm. That makes it less than half the size of the average shoebox. It's also surprisingly heavy and solid feeling. Thick plastic front and back plates are wrapped in an MDF sleeve and come in a whole host of different colour combinations. Controls are limited to a power/band select switch, volume control and a large

True-Colours Industries Cobra Interconnect and King Cobra Speaker Cables

by Roy Gregory

As I've already noted on a number of occasions, there's more sheer rubbish spoken, more absurd claims made for cables than any other product category in hi-fi. Forget the Emperor's new clothes – more of a whole new wardrobe. But that doesn't mean that they're not important and you certainly can't neglect them. Against the background of hype and hyperbole, there are a few companies who have built a reputation for offering common sense products built on sound engineering. Chief amongst these is The Chord Co (of which more next issue) but following in their footsteps are True-Colours. But, product names aside, these are no simple imitators. They have a clear vision of their own.

What we have on test here are the Cobra interconnects (not exactly majoring on originality there then) and the King Cobra speaker cables, and what sets them apart is the balance of their prices. The interconnects weigh in at a far from extravagant £150 a metre pair: The five metre set of bi-wires will cost you £580. That's a price ratio that's more familiar from seriously extravagant offerings like Nordost's Valhalla, and certainly, at this sort of price level the traditional approach would weight the budget far more in favour of the interconnects. Even allowing for the bi-wires, this looks like an imbalance to the casual observer.

However, in practice it's a combination that offers a particular appeal. The True-Colours cables might not offer the transparency, fine detail and dynamic



discrimination of a cable loom like the Nordost Blue Heaven, but nor do they suffer that cable's leanness and washed out tonal colours. In fact, true to their name, the True-Colours cables offer a rich, vivid view of the music. In place of clarity and separation they major on weight, power and presence. It's a performance that delivers the substance of the music without dwelling unnecessarily on the hi-fi niceties.

But, be warned, it's also a performance that takes a while to arrive. Despite use of the Cable Toaster, these wires still needed a week or so to settle into their stride. When first installed they were

distinctly lumpy through their powerful bass, lending music a thickened and leaden quality. Given use however, they began to find their groove, which might be an overused term, but in this instance seems the only one that's appropriate. Playing albums like *Babylon By Bus* brought home the rhythmic drive and sheer momentum these cables bring to the party, especially when things get down and dirty in tracks like 'Jammin'. There's a real growl and authority there as the bass line and vocals dig down to the nether regions, adding real power to the performance.

The soundstage is wide and peopled with solid images, but depth and layering suffer in comparison to the best cables out there. It's a sonic



fingerprint that lends itself to systems that put the musically informative ahead of the hi-fi spectacular. I used the cables in a number of different systems, but the one where they really

▶ clicked consisted of the Rega Jupiter/lo combination feeding the Densen Beat and NHT 1.5 speakers. Not only did the weight and power of the cabling add some welcome scale to these small speakers, but the fact that they're only single wireable saves considerable money when it comes to their cost too. The Cure's driving bass lines displayed that power, but the quality of the vocals, their solidity, expressive colour and presence was just as impressive.

The bottom line as always is that

you pay your money and take your choice. The True-Colours cables offer musical substance and long term satisfaction at the expense of the obviously hi-fi spectacular. It's a contained and positive sound that makes for a compelling system. Other brands might be more visible, but that's more a function of the size of their marketing budget rather than any inherent quality. The Cobra/King Cobra combination is an excellent example from a solid range.

Buy with confidence.



Prices

Interconnects: £150/metre pair
 Speaker Cables:
 Single Wires; £30/mono metre,
 £60 termination
 Bi-Wires; £50/mono metre,
 £80 termination

True-Colours Industries

Tel. (44)(0)7710 196949
 E-mail. support@true-colours.com
 Net. www.true-colours.com

KAB PreCon LP

by Roy Gregory

I've been looking for something to do this job for years, but it wasn't until I was discussing the problems of putting some serious use into the Hovland pre-amp's MC transformers with that companies' Alex Crespi that he told me about the KAB. It's an old story: if you want to run in a pair of speakers or an amplifier, hook it up to a CD player and leave it on repeat. What could be simpler, except that it doesn't work for phono-stages. Given the number of such devices that come through my door, that's a serious problem. I simply don't have the time to keep playing records through each and every one.

An elderly Dual auto-changer with a repeat facility used to oblige, but it wasn't ideal and finally shuffled off to that great analogue showroom in the sky, run into the ground in a fashion it was never designed to support. Since that said day (it eloped with the cartridge too) I've been bereft – until



now. The PreCon LP is from KAB's Great Sound Escorts range. It is a small case, about twice the size of a matchbox, with phono inputs and outputs at each end. An entirely passive device, it accepts the signal from a CD player, pads it down to cartridge output level and applies RIAA equalisation. I suspect that its original purpose was to allow the use of redundant phono inputs with line-level sources, but with the demise of that function it's been reincarnated as a burn-in device.

And a darned good thing too, if you ask me.

Of course, nothing's perfect, and you need to treat the PreCon LP with a little care. Plug it in, play a disc, check that the signal isn't overloading the input. With some seriously sensitive phono-stages this can be an issue. If so, you have the choice of selecting a CD or player with a lower output level, or adding a little additional attenuation. I use a small, in-line passive control that I collected somewhere on my travels some years ago. That aside, the PreCon LP is simplicity itself to use and an invaluable addition to my armoury. At a cost of \$80 I'd consider it essential to any reviewer or dealer who takes analogue seriously, and it should be seriously considered by analogue addicts everywhere.



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Record Reviews

How To Read Them



Lateralus

Tool

EMI Virgin 9210132CD 

What happens if you take a portion of King Crimson, season lightly with Pink Floyd, Metallica, and Gentle Giant, and bake in a crust of American commercial awareness? Answer: Tool's latest CD, *Lateralus*. In fact Tool have gone on record to say that King Crimson are their *raison d'être*, and it shows. What's surprising is that Tool have managed to maintain some of KC's wilfully leftfield tendencies whilst reaching out to the masses in their native country. Here in the UK they seem to be a well kept secret, which is not helped by HMV squirreling their CDs away in the Heavy Metal section of their shops. If this is Heavy Metal, and I seriously doubt it, then it's Metal at it's most intelligent and interesting. Tool don't go for short stabs of fury, instead they create fairly lengthy pieces containing light and shade, throwing in the odd hefty guitar slab where it is felt to be appropriate. 'Ticks and Leeches' is a percussion led maelstrom, whereas 'Schism' dances to an unusually deft bass guitar line, but it's the trio of tracks: 'Disposition', 'Reflection', and 'Triad' that really grab the attention on early plays, moving from delicate acoustic song through a Floyd informed sweeping landscape to the guitar progression of 'Triad'. Together these tracks take up around 20 minutes of the CD, and it simply flies by. Impressive!

DA
















The information contained in the record reviews is presented in the following way. Albums are identified by label and serial number. Beneath this you will find one or more icons which denote the available formats for the recording. The first icon refers to the format reviewed.

The ratings at the bottom of each review reflect the reviewer's opinion of the recording quality, and musical merits of the album. You'll soon realise that a great many musically significant albums offer less than wonderful sound. Don't let it put you off! For your information the scale rates a standard, good quality pop recording as slightly below average.

The reviewers are identified by their initials. They are:- Chris Binns, Pete Christie, Dave Davies, Roy Gregory, Jason Hector, James Michael Hughes, Jon Maple, Reuben Parry, Dave Ayers, Andrew Hobbs, Chris Thomas, Mark Childs.

Key to Icons

-  CD
-  Gold CD
-  HDCD
-  XRCD
-  Double Disc
-  SACD
-  Hybrid SACD
-  DVD A
-  120g 120g LP
-  150g 150g LP
-  180g 180g LP
-  1 Availability As S/H LP
-  120g Vinyl Multiple Album



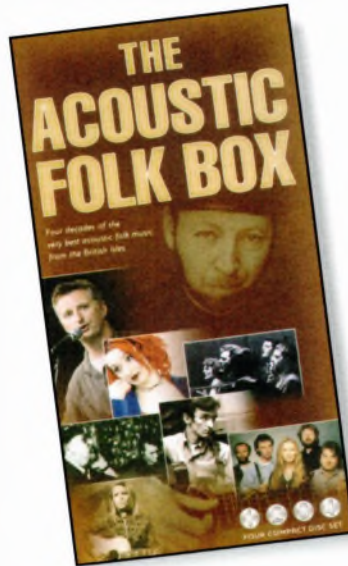
The Flatlanders

Now Again

New West: NW6040

The Flatlanders is in essence a Texas supergroup comprising Jimmie Dale Gilmore, Joe Ely and Butch Hancock, three of the Lonestar States most famous singer/songwriters. All three are revered as solo artists but have been coming together as The Flatlanders since 1971. Recorded output has been sporadic, although their debut *More A Legend Than A Band* is generally considered a lost classic and was reissued on the Rounder Label in 1990. The last recording from the band was a featured song on *The Horse Whisperer* soundtrack called 'South Wind of Summer' which surfaces again here. Recorded on the New West Label, currently home to the excellent Stephen Bruton and a revitalized Delbert McClinton, *Now Again* bristles with 14 sparkling songs, all written by Ely, Hancock and Gilmore except for Utah Phillips' 'Goin' Away' (featuring some lovely Dobro playing from Ely) and Butch Hancock's 'Julia', a catchy little number with a memorable chorus. Personal favourites are 'You make it look easy', a stop/start country rocker with some solid drumming and a fine Dylanesque vocal from Hancock: the twangy, swinging 'Pay the Alligator' and the afore mentioned 'South Wind of Summer' which features a lovely mandolin, fiddle and dobro outro from Lloyd Maines, Paul Glasse and Gene Elders. Clean, crisp production courtesy of Joe Ely adds the finishing touches to a fine album.

AH

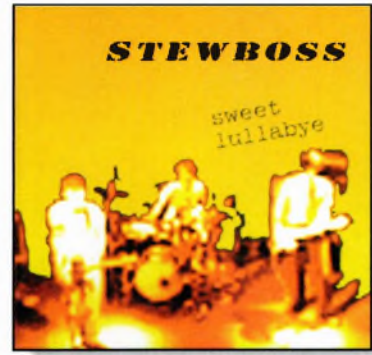


The Acoustic Folk Box

Topic Records TSFCD4001

There have been some fine attempts at covering the electric side of folk and folk rock, but no one has attempted a comprehensive history of the acoustic side of the genre. Until now that is. *The Acoustic Folk Box* is a massive four CD, 85 track trawl through the finest folk talent to come out of the British Isles in the last four decades. The discs tackle one decade each and there are gems to be found in abundance. Skiffle king Lonnie Donegan rubs shoulders with the likes of Julie Felix, Bert Jansch, world pioneers The Incredible String Band and the amazing Sandy Denny on one disc. Disc two and three are crammed with exquisite performances from a diverse array of talent, ranging from Pentangle and June Tabor to the Bothy Band, Kathryn Tickell and the left of centre troubadour Rory McLeod. Disc four features Emmy Lou Harris, Dolores Keane and Mary Black's superb rendition of Cyril Tawney's 'The Grey Funnel Line'; a live version of 'Beeswing' from the hugely underrated Richard Thompson; Shooogenifty's folk/dance fusion track 'Venus in Tweeds' and excellent tracks from Kate Rusby (the brilliant 'The Cobblers Daughter') and Eliza Carthy ('10,000 Miles'). A 56 page, fully illustrated booklet accompanies this lovely box of treasures, a set guaranteed to give the listener hours of pleasure.

AH



Stewboss

Sweet Lullabye

Flying Sparks TDBC0064

Business as usual on this, the second album from prototypical roots rockers Stewboss. Which is a good thing, believe me, 'cos last year's *Wanted A Girl* was one of my records of the year. This time round, settled into the three-piece format they've also settled into their style, making for a more uniform and consistent offering, devoid of the quirkiness of tracks like 'Good Morning'. But the quality of the song-writing is just as high, and the recording a step in the right direction. Not that it will ever be an audiophile darling. That would constitute a complete loss of credibility for a band this real and gritty!

The subject matter here is familiar: love, loss and hard livin', but all with the inimitable Sarfaty twist, perhaps best summed up by the winsome 'The Midnight Shift'. Then there's the sardonic 'I Hope You Miss Me' (tellingly sub-titled "What we really mean when we say we wish them all the best"). The whole album is full of those double meanings and the shifting views that make the Stewboss version such a fascinating and thought provoking one. It's impressive and insightful stuff for ones so young. Oh, and the music rocks too! What America does best.

RG





Doves

the last broadcast

Heavenly HVNLP35CD 



A lot of people have been saying this album marks a departure for Doves, that it is a step back towards their dance roots, that its outlook is more positive, that it's a step away from Manc-rock. Put simply, they're wrong. *The last broadcast* sits so easily beside their debut that they could well be one seamless recording. In fact, when pondering what to write here it was tempting to simply say "see issue 7: Lost Souls". I could go even further and say that you can match the albums song for song. But don't get me wrong, this is not a criticism: their first album was perfect, not a single thing out of place. To create perfection twice is such an achievement we should be shouting it from the rooftops. The formula is simple: solid simple rhythms, chiming guitars, sparse strings, soulful vocals and inspiring lyrics. Then you can't go wrong, so long as you add a handful of epoch defining tunes. To go on and say that the whole thing is skillfully produced (if a little claustrophobic) puts a tick in the final box. The Doves make instant classics. If this album is really as good as their last then no matter how highly I praise *the last broadcast* here, I will look back in a few months and regret I didn't go further.

MC



The Cinematic Orchestra

Everyday

Ninja Tune ZEN CD59/ZEN 59  

The Cinematic Orchestra is a 'jazz' band lead by Jason Swinscoe, a man with more than the usual enthusiasm for the film soundtracks of the fifties and sixties. TCO's second album comes some three years after the first, *Motion*, and develops the themes of late night jazz clubs and rich, textural ambience that first surfaced back then. *Everyday* incorporates the singing talents of Fontella Bass who had a hit with *Rescue Me* in the sixties and has worked with jazz giants The Chicago Art Ensemble among others, and UK rapper Roots Manuva, a man whose style is the antithesis of the gangsta braggadacio of mainstream rap. Despite these significant talents this album's high points lie in Swinscoe's instrumental pieces where his samples and effects are combined with drums, keyboard or sax, bass and turntables to produce rich, vibrant grooves with tremendous depth and power. The use of harp, percussion and double bass adds colour and variety to the mix and do nothing to detract from the contemporary feel of the music despite its early influences. Nothing sounds exactly like TCO but if you like Kruder and Dorfmeister, Bugge Wesseltoft or groove ridden, modal jazz tinged texturally and sonically dynamic music then I'd urge you to investigate this immediately.

JK



Ikara Colt

chat and business

Fpcd005 fantastic plastic 2002 

As garage bands move into the chart it clears out space in the underground for younger, harder, more subversive groups. Groups like Ikara Colt. They appeared a few months ago with their single "Rudd" which is the second song of the superb opening one-two on this blistering album, exploding with huge sledgehammer guitars, earth-shaking drums and synchronised shouting. Possibly the most surprising aspect of the album is that it works so well. For a band that rely so heavily on the personal charisma of their front man, and the sweaty energy and intensity of the band as a whole, a debut album often sounds tired and considered. Instead this sounds like it was recorded in one incredibly violent and energetic session. *Chat and business* is a remedy, a shot in the arm to counteract the sugary aftertaste of Pop Idol. They should be huge, if there was justice in this world they would be huge, but chat and business for all its energy, for all its confidence and talent is not easy listening. If you look like Pete Townsend there are pretty much only two directions you can take in life. Luckily Ikara Colt chose to be in a band.


RG





Hundred Reasons

Ideas Above Our Station

508148 2 Columbia 2002 


2002 is rapidly proving to be the best year for music for a long, long time. Brilliant releases every month since the year began have made the record shops shelves look less like a seven year olds bedroom and more like a serious collection. But with the release of *Hundred Reasons*' debut the Surrey five piece have upped the stakes. *Ideas Above Our Station* peddles a well known brand of guitar rock, with big choruses and even bigger hair. But *Hundred Reasons*, do it better than anyone else. Big drums and crunched guitars form the mainstay of the record, with distinctive vocals adding a touch of style. The production rarely strays from the formulaic, but in doing so pulls the album into a single cohesive whole. But what really stands out about this album is that, for a debut release from a band placed into the spotlight and told to prove themselves, it never gets caught in the trap of seeming too considered. When a song demands chaos, chaos is what they deliver. The surprises of the album come in its quieter moments when the band prove they don't have to rely on sheer force of sound. Subtle dynamics and inventive harmonies make those slower numbers brilliantly dramatic and serve to control the albums direction perfectly. British rock at its best.

MC



Jim Suhler

Bad Juju

Lucky Seven: 9208 


A native of Dallas, Texas, Jim Suhler burst onto the blues rock scene in 1993 with his debut album *Radio Mcjo*, a disc that traded heavily on Suhler's explosive slide playing and reminiscent of George Thorogood in his prime (Suhler's biggest musical hero and influence). The follow up *Shake*, produced by Terry Manning, was more riff laden with an almost ZZ Top feel, but was no less powerful. Fast forward to 2001 and Suhler's latest offering *Bad Ju Ju*, by far his most diverse and satisfying album yet. Weighing in at 61 minutes and containing 14 tracks, it's a beautifully balanced album, excellently recorded by legendary producer Jim Gaines. The band is essentially a three piece, but for such a small band they create a big sound, moving effortlessly from full on slide rockers ('Under The Gun' and 'Deja Blue') to Meters style funk ('Chupacabra') and swampy acoustic slide ('i.o.u.'). Suhler also whips up a slide-soaked storm on 'Restless Soul', a glowing tribute to legendary Irish blues rocker Rory Gallagher and creates a wicked bo diddley groove on 'Don't Believe A Word' (not the Lizzy track!) If you are a purist I suggest you keep well clear but if you like diversity to your blues then seek this little gem out.

AH



Ike Turner

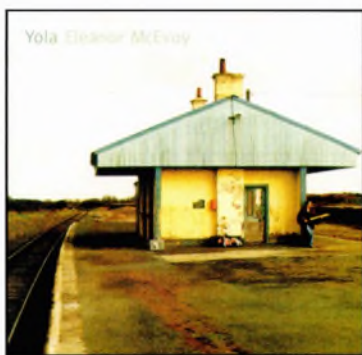
Here and Now

Ikon Records CBHCD2005 

Much has been written about the darker side of Ike Turner's personality - the abusive relationship with Tina, the drugs, the prison sentence, that it becomes very easy to forget what a huge influence he has had on popular music. Way back in 1951 he cut 'Rocket 88' with the band The Kings of Rhythm, a song that rose to the top of the R & B charts and is widely considered to be at the forefront of the Rock n' Roll explosion. Ike met Tina and they went on to record some of the most memorable and super charged R & B ever to come out of America. After a long absence Ike returns with *Here and Now*, an album full of pulsating R & B that goes to prove he's lost none of the musical brilliance he displayed throughout his turbulent career. It's a terrific little record, showcasing Ike's considerable musical prowess on guitar, piano and drums. His guitar playing is particularly impressive, especially on the instrumental 'Ike's Theme', where he demonstrates his unique approach to The Whammy Bar. 'Baby's Got It' features some wild boogie woogie piano, as does the saucy instrumental 'I Need a Nuddin'. Also included is a blistering remake of 'Rocket 88', sounding as fresh and vital today as it did 52 years ago. Well worthy of investigation.

AH





Eleanor McEvoy

Yola

Blue Dandelion EMCD1 (SA) (CD)

Eleven tracks, virtually all penned by Ms McEvoy herself is impressive enough: When one of the few co-writing credits goes to Lloyd Cole then I start to sit up and take notice. Play a track or two and she's really got my attention. Sparse, effecting songs, beautifully recorded and sensitively sung like these don't come along too often. Once in a month of Sundays is nearer the mark. The open recordings and uncluttered arrangements, revolving for the most part around acoustic guitar and piano, push her voice well to the fore, which is exactly where it deserves to be. Caramel smooth with a rich, slightly throaty tone, it speaks straight to you, delivering the lyrics with an ease and grace that belies their power. For make no mistake, these songs might cover the familiar territory of love and loss, emotional pain and vulnerability, but Eleanor McEvoy is no victim. There's an edge of steel, a hidden threat wrapped in the themes and words which hints at the emotional balance in relationships, the costs behind your actions. Combined with hauntingly catchy melodies and a flawless sense of musical poise, the end result is at once powerful and beautiful. Not since early Janis Ian has a record navigated the emotional minefield with such surefooted steps, and that's praise indeed. *Yola* slips on like a favourite jumper. It should become a classic (if only because it's the first great new recording on SACD).

RG



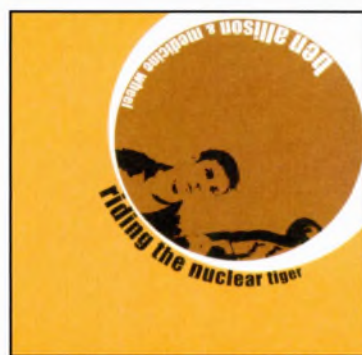
Buddy Miles

Blues Berries

Ruf Records - RUF1073 (CD)

Some Artists earn the right to play the blues - Buddy Miles is one such artist. Born in 1945, at 12 years old young Buddy was playing Drums in his father's jazz combo. He went on to tour with Otis Redding and Wilson Pickett before linking up with Mike Bloomfield's psychedelic blues band The Electric Flag. Work on Jimi Henrix' Electric Ladyland was Miles next project, laying down the backbeat for 'Rainy Day' and 'Still Raining'. After that he formed his own band before Carlos Santana whisked him away for a four year stint as lead singer in his band. Miles played drums on Muddy Water's *Father and Son* album and guested on albums by Bowie, Boots Collins, Stevie Wonder and a host of others before things started to go wrong and he ended up in San Quentin prison. Buddy's life has since come full circle and he makes a welcome return with *Blues Berries*, an album full of tough, uncompromising, rockin' blues. He's surrounded himself with a great band featuring Stevie Ray's old rhythm section and guitar hotshot Rocky Athas, once voted one of Texas' ten best guitarists. Highlights are many, but 'Texas Cannonball' (a tribute to legendary guitarist Freddie King) and the menacing 'Down At The Crossroads' are particularly fine, featuring some blistering guitar work from Athas.

AH



Ben Allison Et Medicine Wheel

Riding the Nuclear Tiger

Hi-Res Music HRM 2007 (A)

Hi-Res Music is a Los Angeles based audiophile label which specialises in re-issuing existing recordings on two channel DVD-Audio, except that the material is not all classic from the vaults stuff. There's some new flesh coming through as well. To see the full range visit www.hiresmusic.com but if you want to hear what American jazz musicians are playing now look out for Ben Allison and Medicine Wheel. This album was released in 2001 on Palmetto Records and features Allison on bass alongside six cohorts. Their style is superficially a new slant on classic fifties artists such as Monk, Mingus or Dolphy in their less frantic moments, although this has a lot of depth and variety. You occasionally hear hints of Zappa in his *Grand Wazoo* period and the Lounge Lizards when they were not exploring the periphery - there's very little dissonance here. While different in style I imagine that fans of EST and Bugge Wesseltuft would appreciate the rhythmic innovation and groove oriented sound of this disc as much as those seeking new angles on classic riffs. Having only heard the DVD-A it's hard to say whether it represents a major improvement over the CD given that Hi-Res only had a 48kHz/20-bit original to work with, but more resolution will certainly be available from a decent A player.

JK



VINYL

For vinyl lovers, the basis for good sound has to be the support of the LP on the platter.

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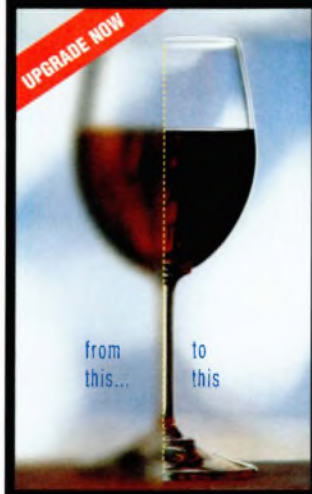
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There was an immediate impression of tightness - a sense of control. Bass seemed firmer, and overall the sound felt more solidly focussed and weighty. Stereo imaging was slightly better in terms of pin-point sharpness and precision.
Jimmy Hughes hi-fi+ issue 15 Jan/Feb 2002

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Various Artists

Both Sides of Midnight

Sirocco Jazz SJL 1011

Oh great, a jazz sampler I thought as this one was unpacked. Just what I need, another set of dinner party noodlings. But fate was smiling on me this day and I was spared. From the opening number 'Twilight' from Joe Locke's album *Burning Beauty* with its powerful percussive drive and sheer energy, through to the closer, Craig Handy's 'It's Up To You', the collection delivers just what it says on the sleeve, "Great Grooves and Beautiful Ballads" with not a duff track in earshot. Standout ballads include 'Peri' from the Peterson/ Kikoski/ Cannon album *Triangular 2* which features some lovely full-bodied bass work underpinning great piano from Peterson (I think; the sleeve notes are sparse!). Also the haunting 'Soldier in the Rain' from the *New York Connexion* album.

The Latin flavoured 'Surrender' from Robin Eubanks is another strong contender in the mix of faster paced tracks, but for me this is beaten by 'Prince of Jade' from Kenny Drew, with cracking percussion work and deep, deep (feel them) bass lines.

Great stuff throughout and a fine and generally very well recorded introduction to an interesting label – and at an absolutely bargain price.

DD

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RECORDING
MUSIC



Chris Anderson

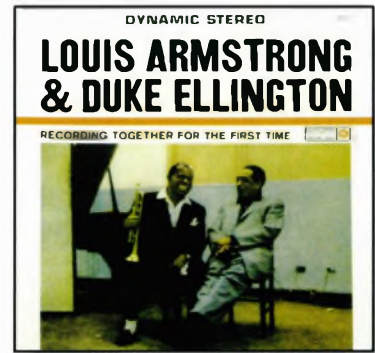
From the Heart

naim - naimcd 035

Recorded in '98 live to a two-track Nagra tape machine by Ken Christianson at Cami Hall, New York, this solo set couldn't be more aptly titled. Suffused with feeling, it is a gentle and contemplative stroll through a selection of standards by a master musician. Self-taught, Anderson has played with many greats over the years including Sonny Rollins, Max Roach and Dinah Washington. His experience tells and whilst at times there are echoes of Ellington, particularly in his feel for melody, Anderson is very much his own man with his own very individual style: Powerful, confident and yet constantly surprising and full of feeling. My favourite track is the lengthy (11m 26s) 'There's a Lull in My Life' which is perhaps the most contemplative and gentle of the set, but very affecting. Marred only by a faint touch of Jarrett like grunting that I could live without but many may find only adds to the realism, this is a fine CD. His one vocal track 'In Love, In Vain' is also a bit of an acquired taste – he's no Jimmy Scott in the elderly vocal stakes – but there's no denying the feeling.

DD

RECORDING
MUSIC



Duke Ellington/ Louis Armstrong

Louis Armstrong & Duke Ellington

Classic Records/Roulette SR 52074

I always keep a beady eye out for Roulette labels when scouring second hand record bins – they've always seemed to combine, whether in mono or stereo releases, an unforced naturalism and dynamic heft that sets them well apart from the masses, particularly in their Basie recordings. This Classic re-issue is no exception and the bonus of the Classic luxury treatment further gilds what was obviously a pretty near perfect lily in the first place. Two of the greatest names in the jazz firmament backed by a selection from Ellington's choicest numbers including 'Duke's Place', 'Do Nothin' 'til You Hear From Me', and 'The Mooche'. For me the album really comes alive when Armstrong eases on the vocals and picks up his trumpet, just listen to 'Mood Indigo' for a flavour of this. This is a fine, uplifting album, superbly recorded and pressed and guaranteed to bring a smile to all but the most churlish of faces. What are you waiting for?

DD

www.vivante.co.uk

RECORDING
MUSIC



Rare French Works for Violin and Orchestra

Graffin/The Ulster Orchestra/ Fischer

Hyperion CDA67294

While Hyperion have been providing significant quotas of romantic piano concertos, Schumann songs and countless other ongoing projects, it has also been examining French violin music. Here Philippe Graffin explores some unusual areas of that repertoire, including one or two genuine rarities. Only the first movement of Fauré's abandoned *Violin Concerto* survives complete, while Saint-Saëns' *Marceau de concert* was intended as the first movement of his *Third Violin Concerto*. Canteloube's orchestral works have nowadays all but been forgotten, as has the composer and teacher of Debussy and Dukas, Ernest Guiraud. Lalo's *Fantaisie Norvégienne* was reworked into his *Rhapsodie*, while his rarely heard *Guitarre* was only designed to be an encore. But while this release gets full marks for originality, supplying a treasure trove of Gallic novelties, it also scores highly with its charm and élan. Despite slightly heavy scoring in Canteloube's *Poème*, its richness should still appeal to lovers of his *Chants d'Auvergne*, and the other pieces are delightful in every way. Graffin plays with character and intelligence, and this CD is an excellent showcase for his youthful talents. Thierry Fischer provides some lovely direction, and the Hyperion recording is always sympathetic, providing a tasteful release of discriminating charm.

SG



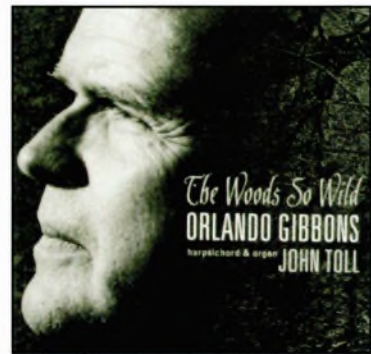
Haydn Symphonies Nos. 6 "Le Matin", 7 "Le Midi" and 8 "Le Soir"

Freiburger Barockorchester

Harmonia Mundi HMC 901767

The trio of *Die Tageszeiten* (The Times of day) symphonies were a direct response by the composer to Vivaldi's *Four Seasons*. In fact, due to the lack of Haydn's *Sinfonia* designation and their musical structure, they may also have been written as baroque concerto grosso. Like Vivaldi's masterpieces, the success of these pieces lies with the quality of the crucial solo performances. Here all the soloists play with deftness, with the flute, violin and double bass making outstanding contributions. In fact, the excellence of the bass makes rivalled issues sound effectual and weak in the three *Menuetto avec Trio*. The conductorless Freiburger Barockorchester eclipse all rivals throughout, with their wonderful purity and poise, especially in the slower movements, and their youthful zest that brings forth textures full of colour. Despite their moderate size, they sound fuller and more dynamic than many larger orchestras but still manage to retain a certain intimacy and sensitivity, revealing their stylish phrasing and the music's witty character to the full. With Harmonia Mundi's superbly balanced recording allowing every detail to be heard throughout the tuttis, in an excellent warm and palpable acoustic, this very enjoyable CD of this music's reference recording comes highly recommended.

SG



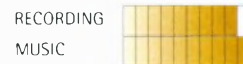
Gibbons The Woods so Wild: Keyboard Works

Toll

Linn CKD 125

This CD is a real work of art and a fitting tribute to John Toll's passionate music making, having lost his battle with cancer last summer. He was a reserved, yet communicative continuo player, with an extensive discography, and was at the very hub of the early music scene, but this is his only solo disc. It was several years in the planning, and contains 24 of the 45 keyboard works that can be attributed to Orlando Gibbons with the utmost authority. All ten *Fantasias* are included, as are the better of the dance-like tunes, with Toll moving between harpsichord and the beautifully toned organ of Addington Hall – a wonderfully authentic instrument that missed any Victorian restorations. The Linn engineers capture both instruments superbly, but what makes this release so special is Toll's insight into the composer's thoughts and beliefs, reflecting them in each beautifully crafted line with articulation and dignity. He manages to produce luxuriant textures of sweet harmony from the organ, while the harpsichord playing is fresh and light, bringing a wonderful involvement to the proceedings, and creating a disc that should be cherished all the more because we will not hear its likes again.

SG





Short Trip Home

Joshua Bell and Edgar Meyer

Sony SK60864



This release, along with *Appalachia Waltz* and *Appalachian Journey*, has made Sony Classical the home of American bluegrass/classical crossover albums. The common denominator in these recordings, holding each session together, has been bassist, composer and producer, Edgar Meyer, whose wonderful talents span the two distinct musical worlds with impressive naturalness. He is well known in both bluegrass and country circles, and is a member of the Chamber Music Society of Lincoln Center. He has also composed his own *String Quartet*, recorded by the Emerson Quartet for Deutsche Grammophon. Along with Sam Bush (mandolin and violin) and Mike Marshall (guitar, mandolin and violin), with their bluegrass backgrounds, there is no lacking bona fide talent, but Joshua Bell might initially seem a little remote from his classical background. You might expect his violin playing to only appear at ease in the classically perceived *Concerto Duo* pieces, but his performances throughout never sound out of place, with his lyrical playing sustaining Meyer's compassionate writing superbly, creating a disc of intricately fused genres, with each dedicated performer constantly enjoying themselves. Sony's sound is excellent, being resolute and direct, and exhibits a natural perspective of each performer, helping to produce another highly enjoyable and noteworthy CD.

SG

RECORDING
MUSIC



Korngold Film Scores: The Sea Hawk/ Captain Blood/The Prince and the Pauper/Elizabeth and Essex LSO/Previn

Deutsche Grammophon 417 347-2



Erich Korngold's conversion from master of the Viennese opera to Warner Bros' music maestro was faultless. From having his works conducted by the likes of Mahler he became the architect of the Romantic Hollywood sound of the 1930s with amazing ease, producing lush scores for the motion picture industry that still retained much of the style of his "serious" works. Previn's background in Hollywood and the London Symphony Orchestra's experience in recording film soundtracks obviously stood them in good stead for this set of extended suites taken from Korngold's four "Errol Flynn" film scores. They play with obvious enthusiasm and swagger, creating the warmth and expansive sense of grandeur that these pieces hold, revealing Mahlerian and Strauss-like melodies that few, if any, have fully realised. Previn creates almost tone poem-like sequences that reveal the music's strength and ability to stand on its own, but still managing to enhance the feelings between Elizabeth and Essex, and his devotion to his queen. With excellent sound, this album is an absolute pleasure, and should be acquired by all enthusiasts of magnificent music and film alike, making a follow-up disc of the composer's other scores a must.

SG

RECORDING
MUSIC



Janáček String Quartets

Skampa Quartet

Supraphon SU 3486-2



The *String Quartets* of Leon Janáček are passionate affairs that ingeniously blend the traditional folk music of the composer's Moravia with the dramatic passages of his own style. They are extraordinary works, with *String Quartet No. 1* taking on almost operatic statures of expressive composition, revealing feelings of compassion that are underlined by a certain tragic brutality, and *String Quartet No. 2* being a declaration of love that, while tense and energetic, has an underlying theme of tenderness and desire. The Skampa Quartet play with the utmost care to deliver every compositional detail, illuminating and enhancing the score to reveal every texture, bringing each performance life and commitment, as only a true Moravian ensemble can. They show a wonderful infinity for both works, enhancing the feeling of conviction and providing inspired playing of sonorous beauty. While the playing is of the utmost beauty, they provide the burning ferocity that is also required, involving the listener in Janáček's studies of life. The recording is also very revealing, with layers of texture enhancing the performance's animation and energy. These performances set new standards for these works, and while the CD only lasts for just over 40 minutes, it is a magnificent disc.


SG

RECORDING
MUSIC





Bartók – 44 Duos for Two Violins
Ligeti – Ballad and Dance
Kurtág – Ligatura – Message to Frances-Marie, Op.31b
Keller/Pilz

ECM New Series 1729 – 465 849-2 

There are too few great works for violin duets, but Béla Bartók's *44 Duos for Two Violins* has got to rank among the most exquisite. Composed for a German music teacher who graded them in order of technical difficulty they have, in the interest of variety, been shuffled on this recording. Almost all are inventive arrangements of folksongs from various traditions and societies, but from the very outset there is a certain gypsy-like rhythmic quality to many. András Keller and János Pilz, two members of the Keller Quartet, play with feeling and authority to reveal both melancholic and exuberant extremes of folk-like undertones. Ligeti's *Ballad and Dance* and Kurtág's *Ligatura* are welcome bonuses, being written in the same vein as the *44 Duos*, and the only puzzling anomaly is the Bartók piece *Bagpipe*, which makes two appearances – while they are alternate versions, they are too similar to warrant the repeat.

Sound quality is up to ECM's usual high standards, with plenty in the way of hall ambience, but just misses out a little as far as presence and detail are concerned.


This is a welcome issue that should appeal to both those who love the violin or the music of Bartók.

SG



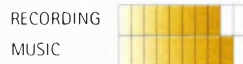
JS Bach
Keyboard Concertos 3, 5, 6 and 7

ASMF/Perahia


Sony SK 89690 

As with Murray Perahia's first instalment of Bach's *Keyboard Concertos* (Sony SK 89245) that I reviewed in issue 12, this recording sets new standards for performances of these works on the modern concert grand. In fact, there are such subtle variations of Perahia's articulation in the *D major Concerto's* *Finale*, the G minor's slow movement and his breathtaking trills and runs in the *F major* (effectively a keyboard transcription of the *Fourth Brandenburg Concerto*), that much can be learnt about these wonderful pieces, even by players of the harpsichord. *The F minor Concerto* is more dynamic, yet still full of texture, and is also blessed by the sensitive murmuring of the pizzicato strings that intertwine beautifully with the theorbo's chordal depictions in its slow movement. Sony's sound is good, but lacks a little depth and naturalness of perspective, with the Steinway sounding too large compared to the other instruments, which are played with the usual articulation and refinement by the excellent musicians of the Academy of St. Martins in the Field, and directed from the piano by Perahia. This is a splendid set of performances, full of serene elegance, that match the first volume's resplendence, creating a highly enjoyable experience.

SG



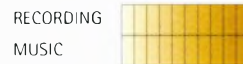
L'Ange et le Diable
 – Music for the violin by
Leclair and Locatelli
Kraemer/Valetti/The Rare Fruits Council

Naive Astrée E 8842 

Jean-Marie Leclair and Pietro Locatelli were two of the most exciting virtuosi and composers of late baroque violin music. Supposedly they met at the court at Kassel in 1728, performing together, after which a jester commented, "The one (Leclair) plays like an angel, and that one (Locatelli) like a devil" – hence the CD's title. What is unquestionable is that the first excelled in a distinctive blend of French expressiveness and Italian exuberance, while the second advanced the boundaries of technique with remarkable feats of virtuosity, almost in the way Paganini would a century later.

It is also true that anyone tackling any of the four sonatas here has to be on top form. Manfredo Kraemer and Pablo Valetti certainly are, dispatching each piece with technical brilliance and a wonderful sense of style. Each work is given the kind of performance that only comes along very rarely, leaving the listener in awe of the soloist's art, as well as the composer's imaginative skill. The remaining members of the Rare Fruits Council are also exhilarating, producing inspired music making with their imaginative and impassioned approach. With sound of the highest order, this is an exemplary issue that can be ignored only at your expense.

SG



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Various Artists: *Sony Ultimate Collection*

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**John Jenkins
Fantasia and Airs**

The Locke Consort

Channel Classics CCS SA 17602 

This hybrid disc comprises world premiere recordings of fifteen newly discovered works by John Jenkins, one of the paramount 17th Century composers of consort music. These Suites, combining both the unregimented old-style fantasias for viol and the dance-like airs of the newly fashionable trio sonata, were probably composed in the 1660s for Charles II, and exhibit certain rhythmical qualities that were key to the King's musical enjoyment. These are supported by dance and song-like melodies, creating rather pleasant pieces that echo the works of Byrd, Coprario and Lawes.

The Locke Consort plays beautifully, capturing the vibrant spirit of these pieces with proper tension in the bowing, well-shaped phrasing and confident articulation, creating fluent tempi. The use of theorbo, rather than organ, adds percussive punctuation and imaginative colouring to the violin's duet passages, and reveals a wonderful freshness in these highly developed works.

The recording is one the best I have heard from this label, creating a naturalness of tone and realistic portrayal of each performer and their instrument, and so producing sound of demonstration class. This lovely release is one of the most enjoyable SACDs I have heard to date and enhances our knowledge of an already appealing composer.

SG



Global Percussion Network

Rauk

Opus 3 CD 22011 

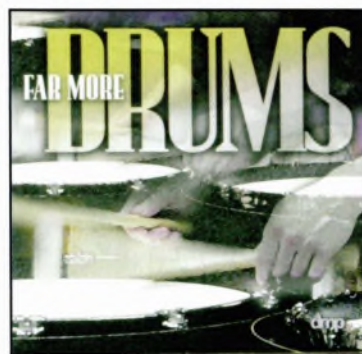
Robert Hohner Percussion Ensemble

Far More Drums

dmp SACD-10 

Audiophile labels have often found it necessary to issue recordings of drumming and percussion. Many audiophiles have purchased them, regardless of their musical enjoyment, with a view to demonstrating the capabilities of their prized equipment – myself included. Whether Reference Recording's *Dafos* or Sheffield Lab's *Drum Record*, they have always found a home in the audiophile's armoury, and with the advent of SACD, specialist labels have once again started to seize upon the chance to issue such discs.

Rauk is a new departure for Swedish label Opus 3. Jan-Eric Persson has for the first time recorded in the digital domain, using four microphones rather than his usual single "Blumlein" arrangement. This is of course to take advantage of SACD's multichannel capabilities, although the centre and sub-woofer channels have not been utilised. The only problem with this new technique is that for those wishing to listen in good old-fashioned stereo, there is a slight flattening to the incredible three-dimensional quality found on many of the label's earlier recordings. Musically, this album is closer to *Dafos* than *The Sheffield Drum Record*, with a variety of instruments, including vibraphone, marimba and



gongs, as well as keyboards and brass, producing a myriad of tonal colours. This is particularly evident in the first three tracks, while *Rauk*, a three-part work composed for solo vibraphone and three percussionists, is more traditionally percussion orientated. The disc closes with a short, but hauntingly beautiful work entitled *Aurora Borealis*. While *Rauk* is subtler in its presentation, *Far More Drums* is closer to Sheffield Lab's *Kodô* disc, with all its dynamic qualities. dmp are more used to digital recordings, and this six-channel recording exhibits a tight and palpable soundstage, even in stereo, making this disc highly suitable for demonstrating SACD's capabilities. Unfortunately, the Robert Hohner Percussion Ensemble do not quite show the abilities of the *Kodô* Group – they just do not seem to have that precision that comes from Japanese discipline.

While I preferred the subtleties of the Opus 3 recording, audiophiles will more likely turn to the raw dynamics of *Far More Drums*. But, the question has to be asked – with many collectors shying away from such recordings, creating a limited availability for sales, why do so many companies covet these recordings so? With the audiophile market already being relatively small, these discs can only represent a niche market within it.

SG

Ruak

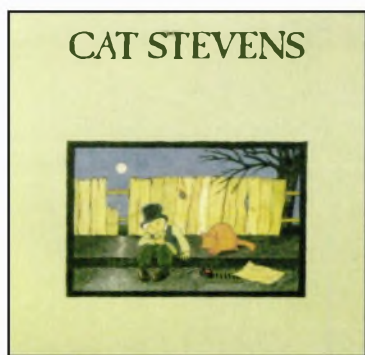
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Far More Drums

Supplier: Vivante – www.vivante.co.uk





Cat Stevens

The Teaser And The Firecat

Island 546 885-1 **180g** **7**

A continuing regard for Cat Stevens albums is as close as I could ever get to being accused of hippy tendencies. *Tea For The Tillerman* is a long time favourite and this, the companion piece, comes a close second. Second because the songs aren't quite as strong, second because the recording lacks a little of the startling immediacy and dynamics of *Tillerman*, perhaps in deference to the softer subject matter. Having said that, this 180g repressing adds body, warmth and welly compared to my original, closing the gap a little and making for a more emphatic delivery of songs such as 'Tuesday's Dead' and 'Bitter Blue' which were always more impressive than the insipid 'Morning Has Broken'. The incomparable beauty of 'Moonshadow' is all present and correct, and the worst thing you can say about this album is that it's over way too soon. I'm not sad enough to sit down and time it, but I'd be surprised if it breaks the half-hour mark. On the upside, they've done a beautiful job on the soft mat gatefold sleeve which, with its pale colour and lack of gloss protection, always suffered horrendously. As a result the plentiful second-hand supply is invariably extremely tatty. This re-issue, on the other hand, is sonically and visually pristine.

RG

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Rimsky-Korsakoff Scheherezade

Reiner, Harth, Chicago SO

JVC/RCA JMCXR-0015 **XR** **1**

If there's one recording which sums up the Living Stereo phenomenon then this is it. From the sumptuous sound of the Chicago, tamed by Reiner's stiff back and imperious baton, to the capacious acoustic of Orchestra Hall captured so convincingly by the legendary Mohr/Layton team, this performance wraps you in its warmth. This is what early stereo is all about. Unfortunately, it's a disc whose reputation has pushed it firmly into the realms of the collectable with second-hand examples commanding astronomical prices, which is the other side of the Living Stereo coin. Fortunately, with this excellent XRCD transfer, JVC have given everybody the opportunity to enjoy this fabulous recording. And whilst *Scheherezade* isn't exactly under represented in the classical catalogue, with a number of lauded performances vying for your attention, most notably the Beecham, this is the one that gets my money. Reiner controls the magisterial pace to perfection, the Chicago respond, brass to the fore, with a performance of sweeping magnificence. Even Harth, who might not be considered a front rank performer responds and plays with such powerful grace and lyricism that he manages to stand undaunted in the path of the orchestra. It's a sublime combination, and for once, both the recording and this re-issue do it justice.

RG

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Arturo Delmoni/Nathaniel Rosen

Music For A Glass Bead Game

John Marks Records JMR15 **CD**

Delmoni and John Marks means that we are on familiar ground here. Throw in the Cello of Nathaniel Rosen and a more than off-beat theme and it produces a disc notable for the musical breadth, inventiveness and purpose of the playing as much as the excellence of the recording. The musical selection is inspired by Hesse's novel about a future in which cultural scholars celebrate the past through a multi-disciplinary exercise, the Glass Bead Game. A player's introduction to the structural forms and mathematical relationships of the game comes through music, and Bach's Inventions in particular. Here, they are transposed for Violin and Cello and form the repeating framework to which we return after excursions through Kodaly, Giordani, Martinu and Handel. It's a successful format, making the most of the close relationship that's grown between the performers over a twenty-five year shared history. The recording is open and transparent, the soundstage beautifully scaled and proportioned, the instruments' tonalities rich and real. Dynamics are impressive, especially in the pizzicato passages that bring the Kodaly so vividly to life. That and the Handel *Passacaglia* are the highest point on a consistently excellent disc. Highly recommended.

RG

Supplied by Hifforsale.com



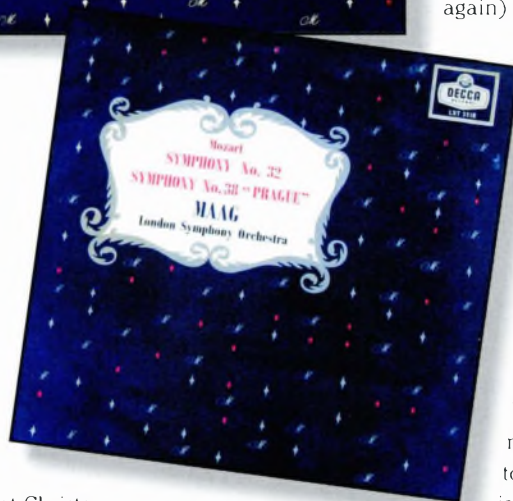
Undermining The Stereo Hegemony...

Or, putting down the reasons for mono's parity in black and white

by Glenn Armstrong

Glenn Armstrong is the man behind Coup d'Archet records, which isn't, as he'll quickly tell you, a re-issue label. Oh no. Glenn's records are originals because the performances he puts on vinyl have never existed in that format before. Dedicated to unearthing recordings by neglected and under rated performers whose recorded legacy in no way reflects their talent, he scours the archives of European radio stations looking for tapes of live concert broadcasts. The results are musically and sonically exceptional, as enthusiastic reviews in these very pages attest. The only problem is that the vast majority of these tapes are mono. Only that isn't a problem if you know your stuff.

Here's a little story from Andy Walter, engineer at Abbey Road, self-confessed mastering engineer of 'more mono recordings than anyone'. Strauss' *Der Rozenkavalier* was recorded in 1957 by Douglas Larter and produced by Walter Legge. Featuring his wife Elisabeth, the great Christa Ludwig, et al, it was produced in mono. It was Legge's personal triumph, a long sought achievement. Chris Parker created experimental stereo sessions more or less simultaneously. *Der Kavalier* was issued on mono LP and the very next year re-issued in the stereo mix, EMI presumably taking their cue from Decca's Mozart opera



series. The mono was promptly deleted and the stereo version 'ruled the roost' forever after. As Walter Legge never approved the edited stereo version, Chris Parker should have been credited as producer. In 1997, for her 80th birthday, Schwarzkopf re-produced the mono LP (engineered by Andy) for a special edition CD version (which was rapidly deleted - again). The stereo version (Andy again) is the one available in the

EMI catalogue on Great Recordings of the Century. The mixes and editing were different on both versions, and in neither case has the artistically definitive one survived. A couple of months back RG first mooted the notion of my contributing a piece to Hi-Fi+. As a bona fide producer of mono records who better to grace his 'back to mono' issue? At least I guess that's what he thought. Besides he

offered me an opportunity for shameless self-promotion, and those don't come along every day. But under the circumstances I think I've been rather restrained. It's just that mono recordings and pressings really do have rather a lot to offer. Oh yes they do

▶ Lets begin by examining our fascination with Stereo (and our dismissal of mono) from a variety of different angles. Anyone can tell you that a mono top-opening copy of *The Beatles* commands double its stereo twin on the collectors market (can't they?). However, the first press stereo of *Please Please Me*, issued some 5-6 years earlier could in mint condition beat the mono by at least five laps. Why? Both LPs were first mixed in mono, the stereo mixes unattended by the Boys themselves and left to the whims of the engineers present. So we understand 'mono good because mono original'. So what about this price for the stereo? Well, that'll be the 'people who collect stereo', who I have noted have also adopted the crowning appellation of 'Audiophiles'. Ahem. Does that make people who like mono 'audiophobes'?

Against all odds, I am an unapologetic Mozart fan (some might say that this fact will render all value judgements presented here as suspect). For many years my holy grail was the SXL of Peter Maag's Mozart *Symphonies 32 and 38*. I've had the mono 'equivalent' for some time, loved it, and knew Maag's Mendelssohn records for their truly amazing stereo presentation (shame about the music). So when last year I forked out and finally held a stereo copy of the Mozart in my hands I was a very happy bunny. Until I played it. Dear oh dear. Surface noise, tape hiss, thin scrawny sound and phase trouble. I hasten to say this is a pristine copy. As an interesting addenda here I should note that though I have seen many stereo copies of this record in various states, my much loved mono edition is the only one I have ever seen – in any condition. My stereo is for sale – the mono is priceless. Another record with a similar personal history is Eric Dolphy's *Out to Lunch*. Venturing into the realm of heavy Jazzers, the 'audiophile' element has been attracted to the stereo edition, driving up the price of an original pressing considerably. They are welcome to it. These guys really need to hear the mono. Yes it does...from a very great height indeed. Oh dear, I so wished this piece wouldn't turn into a stroll through my record collection, but its inevitable I suppose.

I was asked to do this piece because I produce mono records. However, this is not been entirely a matter of choice. All my material is sourced from radio archives and of all the material I have found to fulfil my criteria,

there has been but one stereo recording of any interest at all. My reasons for not acquiring this tape were two-fold – firstly much of the repertoire had already been issued in stereo in the artist's lifetime, and secondly, the quality of this artist's performances had grown to be more and more unreliable towards the end of his career. Given Coup d'Archet's prime directive, the first reason was enough. So, whether I like it or not, the recordings available to me are mono. Radio was reluctant to take to stereo. However,

given that most of the artists I have chosen to issue never made stereo recordings, I can't say that I am particularly concerned. Especially when most of my favourite records are mono.

Why, in Classicalrecordland, if given a choice between a stereo copy of a recording, and the identical performance in mono would most of us choose the stereo?

It seems as if by dint of its very existence stereo has the upper hand. In Jazzrecordland, it's the monos they want. People on the pop scene have been talking about the

mono mixes for *Andy Warhol*

Presents the Velvet Underground and Nico, Revolver, and Piper at the Gates of Dawn for donkey's now. Was there a mono mix of Electric Ladyland or not? Will it ever end? Have you ever noticed how most contemporary pop has little or no stereo imaging? Its in ya face mono.

Alan Blumlein developed stereo in 1931, but it was rejected as impractical for 78. When the next generation of EMI engineers were having trouble developing stereo, Blumlein's notes were disinterred and were found to have all the answers. Well most of them. All of a sudden one had these incredibly huge wide orchestras, the sound all wishy-washy with masses of reverb. Spread wider left and right and set way back with a massive hole in the middle. Never mind the quality feel the width. But mono was beating stereo hands down in terms of presence and dare I say, honesty.

All those engineers had years and years to perfect mono. Remember that early stereo was just that – early. There was much experimentation going on, and for every fantastic stereo recording there were half a dozen that failed. You can bet your last penny that there weren't many bad monos around in the late fifties (any earlier problems tended to be down to manufacturing).

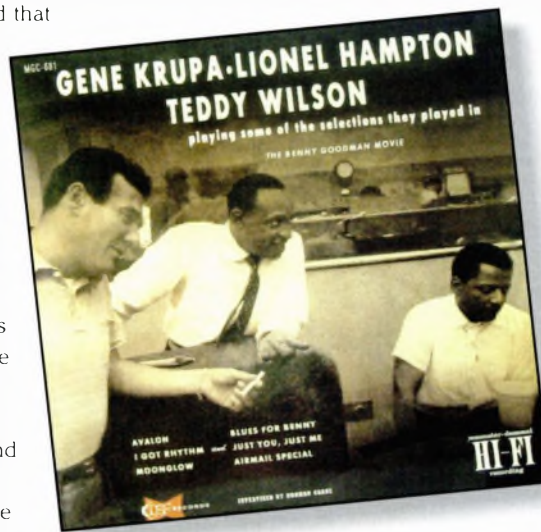


▶ By the sixties they were exceptional.

I've read lots of stuff about being able to hear 'that concert sound' in your living room. Its all about the orchestra and getting that spread; being able to hear all the instruments in their right place (well sometimes). All the instruments, even if the triangle peals out like a trumpet. The first thing to remember with any record is that what you are hearing is not real. Yes, really. How many microphones are in use? One for mono, two for stereo? One stamp for yes and two for no? Whether a mono or stereo mix, you can be certain there are actually a fair few, especially if there is an orchestra involved. The recording must be balanced. If there isn't enough definition in the woodwind, lets bring them up in the mix. One can hear a clarinet on record that

one could never hear in the concert hall. What about the reflective sound of the room, or that halo of harmonics raised by the combination of instruments? Mixing a recording is an art form all of its own. It is artificial. Is there only one microphone used to record a quartet in mono? No. There will be at least two, perhaps three. Then comes the artistry. The sound is mixed. Back in the old days engineers were extremely skilled in making mono mixes, and capable of making exquisitely balanced recordings. Walter Legge swore by mono and never approved of stereo. At its inception there was massive feeling against stereo. It was widely regarded as a gimmick. Meanwhile mono was being presented as old technology.

In the US record buyers were put in the rather insecure position of having to fork out an extra dollar for the new stereo (mono buyer branded not only cheapskate, but cheapskate reluctant to embrace the FUTURE). Here at home the price was the same. Oh how we must have marvelled as the steam locomotive 'Cambrian Coast Express number 183' first barrelled through our living rooms. How rumour spread like wildfire across the suburban primness of post austerity Britain, garbled words over Sunday pints, and 'looks' over the garden fence. Stereo became the new baton in the relay of modern life. Car? Check. Television? Check. Washingmachine for the little woman? Er, yup. Stereo? Stereo? We were in the electronic age, the atomic age, the dawn of the space age. We had money again and we were alive. We wanted 'Living Presence' in our living rooms. We were ready for it



and some of us could afford it. Record companies realised it would be hard enough for the great British public to be persuaded to upgrade their equipment let alone pay extra for the discs. Meanwhile some people carried on buying music. How many double sets have I seen, which have obviously lived their whole lives together, inseparable, trapped by circumstance in an unconventional marriage. Record One in Stereo and Record Two in Mono? Nobody told them it was wrong, they were in love.

People would never dream of listening to one speaker anymore. This was one aspect of stereo that no one could be disparaging about. I quote, 'The subjective effect of

listening to a standard LP (mono) through two loudspeakers is quite different from that of true stereo. Of course there is no sensation of being able to locate the different musical instruments in the orchestra, but the mere fact that the sound appears to come from somewhere in space instead of being tied to a single loudspeaker grille helps the illusion of realism'. Interestingly enough Andy told me that when he plays a mono tape, no one ever comments on its 'mononess'. People

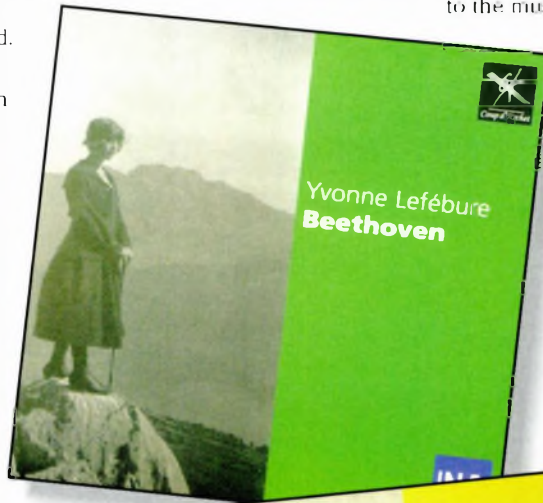
concentrate on the performance, the music. However, when it's a stereo tape, conversation moves around the recording, and the 'sound' of it. There are five massive B&W monitors in his studio.

I like the immediacy of mono, its solid no-nonsense here-I-am presence. It's the virtual physicality of the sound that dumbfounds. A couple of years ago a close Japanese friend gave me my first mono cartridge as a gift. French, it was made for the professional market in the sixties and came unused in its box. It tracks at six grams. (Did anyone hear that pin drop?). I don't know what I was expecting, but it certainly wasn't what came out of my speakers. I was utterly amazed. This was the sound I heard in the cutting studio at Abbey Road, that rich open sound, full of air and light. All the monos in my collection, records kept for the quality of performance, the personality of the artist, pushed forward for attention. Records that had sounded a little thin, nervous and polite (if not actually consumptive) with a stereo cartridge (I had always assumed it was the sound of the times) presented themselves with positively Falstaffian

► robustness and humour. They clapped me on the shoulder and laughed at the look of incredulity stuck on my face. This was magic and it was no trick at all. I didn't listen to a stereo record for weeks. I didn't want to. Now I have dedicated mono and stereo systems. There was no other option. I can play with two turntables without ever being mistaken for a wannabe DJ. I just want my records to sound as they should.

While it is tricky to grasp precisely what is going on when a stereo groove is being cut without recourse to animated diagrams, mono is a simple straightforward lateral cut - that's modulations from side to side. Only. While it is true that a stereo cut will force the stylus to modulate both laterally and vertically, its not a simple as that. Sugden developed a system in 1956 that used lateral movement for one channel and vertical for the other, which because of noise and distortion problems was abandoned. It was noted that vertical modulations are more liable to distort than horizontal, and it was these inequalities that led to the introduction of the so called 45/45 approach which became the industry standard for stereo.

The faster the speed of the tape when recording the less hiss is created. When spread over two channels (stereo) tape hiss is actually doubled. So even at 30 ips stereo cut you would effectively be producing the same level of hiss as you would from a 15ips mono cut. It's worth at this point bearing in mind that tape quality was higher in the fifties than in the sixties and thereafter. Tapes of mono mixes are incredibly quiet. This is a blessing for me. While tape hiss can be removed digitally, thus improving many classic discs from the early days of stereo for CD reissue, if one wants to go the analogue route, well sorry, while certain efforts at high and low level noise reduction can be made, there can only be the tiniest adjustment without a detrimental effect on the sound of the instruments. So, in my self inflicted penance as a producer of historical vinyl, how much trouble have I had? Thankfully, very little. Mono you see - minimal tape hiss. Much of the material I'm



choosing is so quiet it doesn't even need noise reduction when mastered for CD.

Lacquer cutting is particularly suited to mono. A purely lateral cut can be deeper. The deeper the groove is the more sonic stability and the less surface noise is created on the LP. Nick Webb does my cutting at Abbey Road. His approach is one of care and honesty to the music. In typically deprecating form

he will say that he errs on the side of caution. What I can tell you is that we do not make 'loud cuts' with the levels up to drown out any surface noise or tape hiss. With instruments as dynamically volatile as violin and piano, for example, if you let them peak too high you're going to get distortion. Good quality vinyl is of course essential. This is where some of the minor record producers of the fifties went wrong. The mix of the 'material' was essential to a quiet disc. Did you know that once upon a time there were four different grades of vinyl for microgroove? Some producers were so unreliable. Nixa is a company that springs to mind for both its genius and its ineptitude. For the most part Nixa licensed their recordings, borrowing the master tapes

mostly from the States and cutting their own lacquers here in Blighty. Some of my most favourite records are Nixas, but you try finding good ones. This isn't just about finding a copy in good shape. Some titles must be eternally damned, nary a one any good. Other titles, well you might be lucky. Some you will think you have been given the keys to the kingdom. Some of Nixa's finest efforts have been with Westminster and Period recordings....also some of their worst. You pays your money.

One can certainly tell a good mono record from a bad one using a stereo cartridge. No mono cartridge ►

▶ will make a bad mono cut sound good but it will make it sound better. But a mono cartridge will bring out the best from a good mono cut, a rich tonal palette that is never apparent with a stereo cartridge. Mono is tight and compact, a very focused sound, and very 'present'. It sits happily 'there' right between two speakers. Of course one has no phase problem.

If one is into those classic performances of the fifties and sixties and wants them on their original vinyl, it would be cheaper and arguably more rewarding to purchase a mono cartridge and buy all those 'mono of stereo' records that no one wants to pay more than a tenner for. Mono Ansermet *Petrushka* anyone? I'll tell you it knocks the stereo for six. Or you can pay your two hundred and fifty quid for a 'Blue-back' and hang it on the wall next to your mounted moose head.

If all this effort to fool the listener is made with the intention of creating the definitive recording of a work, why is it too often a surprise to hear a work played as it was written? But that, more often than not, is the result of unchecked ego in the maestro department, and the recording process itself is never about ego, oh no. While Stokowski rewrote works and physically rearranged orchestras for the benefit of mankind and the stereo soundstage, von Karajan actually determined the length of play of the CD. Its how long it took him to get through Beethoven's *Ninth*. Custard pies out lads. Let 'em have it.

There are great recordings, both stereo and mono. It is up to us to find and decide which are truly worthy of our attention and which are red herrings. Given time we can at least be selective. Meanwhile we must remember that all we hear from hi-fi is an illusion. It's magic.

Thanks to Nick Webb, Andy Walter



You can contact Glenn Armstrong (and tell him all kinds of horrid things) by clicking the appropriate button on his website, www.coupdarchet.com

Glenn's Top 25 mono records

In no particular order – it was hard enough just to choose. I've tried to avoid the obvious candidates such as Elvis, Beatles, Stones, Dylan etc. We know those lists. All these are UK pressings unless otherwise indicated.

Ella Fitzgerald – *Songs from Let No Man Write My Epitaph* – CLP 1396

Aretha Franklin – *I Never Loved a Man the Way I Love You*
– Atlantic 587066

Albert Ayler – *Something Different!!!!!!* – Sweden, Bird Notes BNLp1

Shirley Collins and Davy Graham – *Folk Roots, New Routes* –
Decca LK 4652

Pierre Henry – *Musiques pour La Reine Verte* –
France, Prestige Unidisc UD 30.137.M

Nico – *The Marble Index* – Electra EKL 4029

Pink Floyd – *The Piper at the Gates of Dawn* – EMI SX 6157

Sugar Pie Desanto – *Sugar Pie* – USA, Checker LP 2979

Ray Charles – *What'd I Say* – London Atlantic HA-E 2226

Eric Dolphy – *Far Cry* – USA, Presitige NJ 8270

Charlie Mingus – *The Black Saint and the Sinner Lady* – CLP 1694

Marvin Gaye – *In the Groove* – TML 11091

Rosalyn Tureck – *Bach, Well Tempered Clavier Books 1, 2* –
US Decca DX 127/8

Marcelle Meyer – *Rameau, L'Œuvre de Clavier* –
France, EMI Référence 2C151-10493/4

Johanna Martzy – *Bach, Unaccompanied Violin Sonatas* – 33CX 1286/8

Walter Gieseking – *Grieg, Lyric Pieces* – 33CX 1467/8

Erica Morini – *An Italian Baroque Violin Recital* – US Decca DL 10102

Janos Starker – *Kodaly, Duo for Cello and Violin, Sonata for
Unaccompanied Cello* – USA, Period SPL 510

Vegh String Quartet – *Bartok String Quartets* – 33CX 1245, 1267, 1285

Barchet Quartet – *Mozart, The Haydn Quartets* – VOX PL 9480, 9540, 9820

Barylli Quartet plus Hübner – *Mozart String Quintet in C Major K 515*
– NIXA – WLP 5271

Menuhin/Furtwängler – *Bartok Violin Concerto* – ALP 1121

Vittorio Gui, et al – *Mozart, Le Nozze di Figaro* – ALP 1312-1315

Vienna Phil Wind Group etc, Mozart – *Sinfonia Concertante
E Flat K ANH. 9* – NIXA WLP 5020

The Jacobean Ensemble – *Purcell Sonatas of III Parts* – Argo RG 84/5

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Mike Manning

Yeovil
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Phonography

Ringwood
Tel. 01425 461230

Progressive Audio

Gillingham
Tel. 01634 389004

Radfords

Bath
Tel. 01225 446245

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Tel. 01179 441010

Signals

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Tel. 01473 655171

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