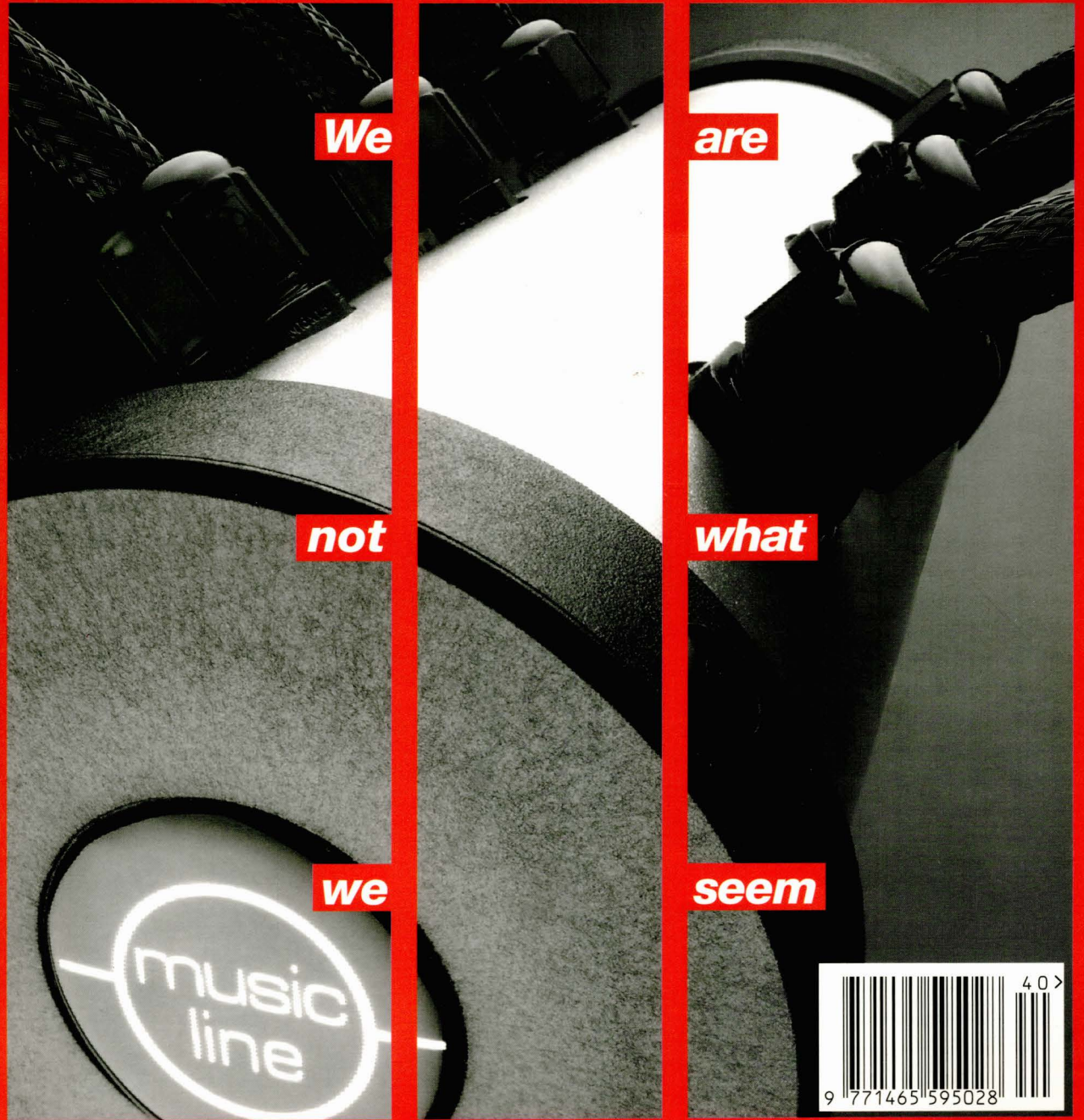


# hi-fi+

Issue 40  
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# Editorial

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## Printed By

JPS Litho Ltd., Poole

Hi-Fi+ is published eight times a year by; Hi-Fi+ Publishing Ltd

ISSN 1465 5950

Trickle down: it's an enticingly simplistic concept, which partly accounts for its appeal. After all, who doesn't like the idea of buying a slice of some piece of ultra expensive exotica on the cheap – 95% of the performance for a fraction of the cost? Well, unfortunately, and just like the law of diminishing returns, it's an argument that's all too often been used to justify the existence of over-priced, under-performing product that would be laughable if the industry didn't take it so seriously.

But, the worst excesses of marketing departments aside, I'm shocked to discover the presence of not one but two, genuine trickle-down products in this issue. Okay, one's only a news piece, but by offering the new Electra BE range, Focal JMLab are delivering something that gives away very little indeed to the flagship Utopias while costing almost exactly half as much. The new tweeter developed for these models actually promises superior performance in certain respects to its illustrious fore-runner, while the cabinet work and system concept have also seen significant development.

Meanwhile, Rogue Audio have responded to the threat of Chinese valve amplifiers colonising their home market by producing text-book budget esoterica, the perfect balance of clear conceptual thinking with sensibly selected hardware. The results (at least in musical terms) speak for themselves. The Metis and Atlas reincarnate the price/performance equation that first brought valves back into the limelight.

Next issue we'll be looking at the new dCS integrated CD player, and a few other choice examples of equipment that offers exceptional performance at surprisingly affordable prices. And whilst I'd be hard pressed to describe any of this stuff as cheap, it does signal a major shift in the high-end market. The good news is that performance and value are clearly both back on the agenda – big-time – with many companies responding just as fast as they can and in the only way they know how. Nothing like market-forces and the survival imperative to make trickle down a reality!



**"A little champ of price/quality ratio:  
available at an affordable price, especially for a tube  
amplifier of more-than-usual power."**

AUDIO REVIEW Italy, July 2004, Claudio Cecchi

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geniuses, this amplifier has to my ears-  
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HI-FI NEWS and record review, July 2004, Ken Kessler

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Excellent finish and build quality makes  
for a package strong on value."**

HI-FI WORLD, August 2004, Dominic Todd



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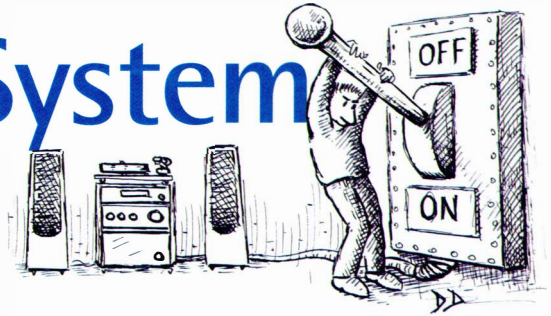
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# Playing The System

by Roy Gregory



So, the move is over and it's time to embark on the unwelcome odyssey presented by a new listening room. Not that unusual an occurrence amongst our readers, I suspect, and despite plans for a dedicated reviewing environment, until that actually takes shape, the issues facing yours truly are probably not that unusual too. And if we're honest, how many amongst us, new room or not, have really optimised their listening conditions? Well, there are steps you can take (and some you can't – just as long as we're talking about shared space here) in any situation so I thought it might be interesting to follow the path from taking possession through to having a system up and running.

The new home was built in 1980 and is slightly odd in so far as it's built upside down! Not literally you understand, it's just that the living accommodation is upstairs, the bedrooms down. It's an arrangement that happens to suit us but it does create a few structural oddities – some good, some not so good. The lounge area is a decent space that opens onto both a landing and the dining room (see the accompanying diagram). This creates a main listening area that is rectangular and almost exactly 4m by 6.5m and 2.4m high; which is a promising start. However, bear in mind that the fact that it is upstairs means that it has a suspended rather than a solid floor, which could be a source of problems. Also, note the large French window that occupies the middle of one long wall.

That's what you get given and, short of major building work there's not a lot you can do about it. There again, like us, you could set yourself an additional challenge in the shape of a minimalist, modern décor. So, add into the mix large expanses of bare white wall and equally bare wood flooring (a medical necessity dictated by Louise's asthma and you end up with an extremely lively and reverberant space. Of course, if its sole purpose in life was to provide a good acoustic environment there'd be no problem, but having previously cohabited with enough hi-fi to open a decent sized shop, Louise was understandably adamant that this state of affairs was not going to arise again – and that means not so much as a toe in the door, a Room Tune in the rear corner.

Now, whilst my situation is probably a little more extreme than most, and whilst the specifics are clearly, well... specific, I'm sure the general scenario is pretty familiar to many of you. My problem is creating a room that sounds good without making it look like anything other than a perfectly normal, albeit minimalist, front room. In fact, our taste in décor is half the problem in itself, simply because it tends to rely on uncluttered, non-absorbent surfaces. So, any acoustic treatment is going to have to be invisible or portable. I'll get to that later. First let's look at a few of the real basics that apply to every situation.

One real benefit of the suspended floor was that it made rewiring a piece of cake, especially when you factor in getting shot of the carpets and the new flooring going down. The house required a complete revision of its electrical arrangements anyway, so a new fuse board was installed, fitted with a dedicated circuit for the hi-fi. The actual wiring used was unscreened 30A cable, which was laid in a single spur to two pairs of unswitched sockets, one in the dining room, one in the lounge, giving me a choice of system locations. I chose the single spur arrangement in order to minimize RF issues with the unscreened cable. Directionality of the cable was discovered by the simple expedient of making up two mains leads with their relative directions marked and comparing them by listening. The spur was then laid in accordance with the results. Both sockets were provided with a 30A flying lead tied to a clean earth in the garden and everything was cleaned and tightened after installation.

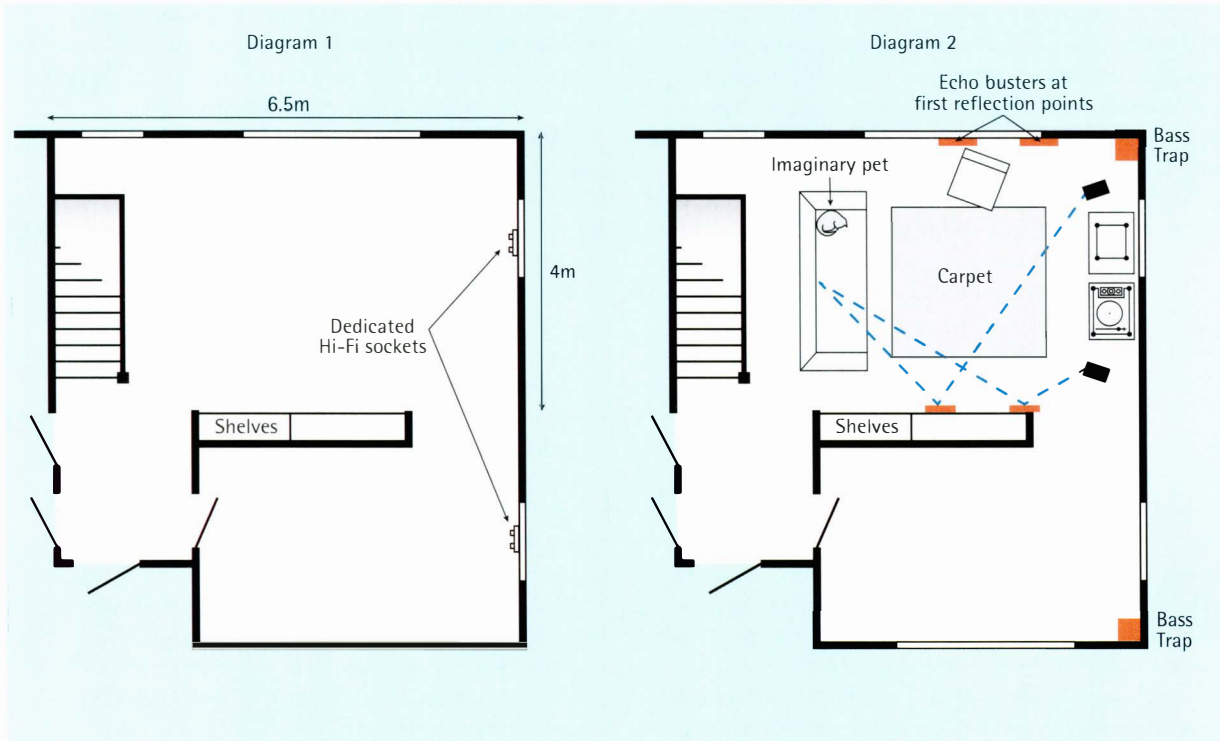
Aside from a large sofa, a rocking chair and footstool, furniture consists of the hi-fi and little else. A thick, wool rug 2m square is situated between the sofa and the speakers and the French windows have full length although relatively light curtains. The other windows are covered by Pleatex blinds, again, choices dictated by the effort to avoid dust traps. Besides, Venetians rattle at decent levels... One good thing about the existing structure was the coving around the tops of the walls. This has a surprising effect on lively rooms and is something

▶ that's well worth considering if that's your problem and you don't already have it.

The system was set up to fire down the length of the room, with initially at least, the equipment located between the speakers. I'll be trying the alternative location in the dining room once things settle down. First order of business was to actually get things in place – not as simple as it sounds given the vulnerability of the floor surface to spiking! I started by simply standing the spikes on a variety of discs and footers, just to get things up and running. Then it was a case of sorting out speaker positioning

behaved. However, what was also rapidly becoming apparent was that the lively acoustic was playing merry hell with the imaging, separation and focus. This is where the fun starts!

My previous, similarly bare listening room was blessed with a solid floor covered by wall to wall carpeting. The walls were all load bearing and extremely solid. The resultant lively acoustic was tamed using a full quota of Room Tunes pads, which are (as acoustic treatment goes) pretty discrete – at least in terms of size. Unfortunately, small as they are, they also need to be



so that I could actually hear what was going on. A few hours spent with a tape-measure and the LEDR test disc later and I had a much better idea of just what I'd taken on. With the speakers pointing dead ahead I set out to march them first up and down the room and then side to side to establish the best bass balance. Having done that with a variety of recordings I then sorted out the best listening distance. What I actually ended up with was speakers positioned at 58cm from the rear wall and 2.7m apart. The listening seat is at 3m, which accords pretty well with the 1 – 1.1 ratio favoured by urban legend.

So far the news was good. Bass was surprisingly powerful and even, evidenced by excellent pace and rhythmic integrity. The nightmare scenario of a dominant, booming resonance clearly wasn't going to figure here, the lumps and bumps being surprisingly mild and well

tightly fixed to the walls if they are to be effective. That makes them a semi-permanent fix and thus unacceptable in the new room. They're also unmistakably alien in the context of 'normal' modern décor. So that makes them doubly unacceptable.

Dealing with the room in question, you don't exactly have to be an acoustics genius to work out that first reflections are going to be responsible for a lot of the damage. Not only are the walls largely bare and reflective, but even the floor, normally assumed to be carpeted, is throwing in its lot with the disruptive elements. The first port of call has to be a portable solution to those side-wall reflections, if only because they're the easiest to deal with. In fact, the solution was easier than I imagined. A few quick phone calls garnered the loan of ten Echo Busters panels and a couple of the company's bass



▶ traps, lying dormant in a shop's stock room. These are far larger and more intrusive than the Room Tunes, but crucially they're also built into rigid frames. Measuring 45cm wide by 152cm high, they are 6cm thick and covered in a plain, oatmeal fabric. Hardly things of beauty, they are extremely light and portable, making transport to and from the lounge for critical listening a practical proposition. Even more so as a tailor made slot for storing them unobtrusively exists next to the cabinet in the dining room.



Using the tried and tested method of a second body holding a mirror in order to sight the speakers' tweeters, pairs of panels were placed at the first reflection points on the left and right walls. What a difference! Whilst I'd probably frown on such a heavy handed approach under normal circumstances, in this, highly reverberant room, the effect was little short of miraculous. Not only did I have a recognizable soundstage, but the images were focused, dimensional and well layered in depth. The LEDR tests allowed fine tuning of toe-in and with the speakers finally positioned it was time to get them absolutely vertical, which locked up both the coherence and height of the 'stage. In fact, at this point, the results as regards reflections were sufficiently impressive to turn to other matters. Now that's what I call a result..

Last step in this initial foray involved placing the two Echo Buster bass traps (one at a time) in the rear corners of the lounge (behind the speaker) and dining room. These are similarly light to the panels but with a 30cm square footprint and the same fabric finish. Less easy to manoeuvre I've actually got away with

leaving these in place, hidden behind a speaker and a large, bushy plant as they are. Just as well, because they have a worthwhile influence over the low frequencies, further smoothing the response and improving separation and pitch definition.

Having embarked on what I fully expected to be a long and potentially horrible path, I was surprised to find that it was almost as if I'd tripped over my feet and found myself totally unexpectedly at my destination. Okay, so the set-up I've settled on (so far) is hardly the last word, but both in terms of system performance and improvement over the initial sound, the results are pretty damned impressive. Impressive enough in fact to suggest that similar experimentation is well worthwhile – if only to see what you get in your own room.

This treatment, whilst far from subtle with the panels in place, is only phase one of the

recommended set-up. Going the whole hog would entail dealing with the first reflection that everyone forgets – the one off the ceiling – followed by providing some absorption on the wall behind the listening position.

This latter route should be readily investigated with a temporary arrangement (and I have the panels to do it) although in my case, the open staircase with the extensive hall and corridor downstairs might serve a similar purpose. As to the ceiling – I think that one's going to have to wait for the dedicated room.

Next stage will be the whole question of feet/supports for the racks and speakers. Even quick and dirty experiments have shown that discs between the spikes and the wooden flooring are far from the last word when it comes to sonic performance (or security when it comes to shifting and shunting the kit around). Currently I'm getting excellent results from Cerapucs under the speakers and either Cerabases or Ringmat feet and spike footers under the racks. I'll report in more detail on the results and differences next time, which are interesting indeed. I might even get as far as those experiments with the wall behind the listening seat...



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# Music Matters



by Alan Sircom

The hi-fi industry is often guilty of many crimes against rational thought, but the most pervasive of all is Panglossism. Back in the Enlightenment, Voltaire's black comedy *Candide*, featured a hopelessly optimistic character called Dr. Pangloss, a not very veiled slight on the works of the German philosopher Leibniz. It is from *Candide* that we get Pangloss' most famous bon mot; "everything is for the best in this best of all possible worlds".

Of course, the novel takes Leibniz' philosophical optimism apart slowly and not quite methodically, drawing in theological debates about this perfect world, a creator god and personal suffering. But much of this is lost in the public domain. Instead, all we have is "the best of all possible worlds". And it's this watered-down optimism that is so horribly damaging to hi-fi.

You see, manufacturers and consumers alike have taken Dr. Pangloss' optimism to heart, believing that the world of hi-fi is benign and benevolent. So, the manufacturers design products and formats that are beyond the ken of anyone bar the most phillic of audiophiles. Meanwhile, we the punters happily believe that everyone shares our dreams of better sound quality from audio. After all, the powers that be have developed better-than-CD formats like DVD-Audio and SACD, haven't they?

Sadly, we don't live in the best of all possible worlds, at least not as far as music and its replay are concerned. We, the high-end community of audiophiles and manufacturers of audiophile equipment are fast becoming the last bastion of good quality music. In the past, we were the keepers of the best reproduced sound, from replay medium to ears. But now, even that is fading and our desire to deliver the best possible sound is falling on deaf – or worse still, actively not listening – ears.

Worse still, we have seen a return to 'tickling up' the sound using tone shaping at the replay end. As this can now be done in the digital domain, many view tone control adjustment as a necessary and benign aspect of musical replay. Necessary it may be, benign it often isn't. From a philosophical standing (hey, I started with Voltaire and Leibniz, after all), if you need to shape the tone to make the original track listenable – not enhanced, listenable – you are on shaky ground from the

outset. This is not because the majority of high-end hi-fi lacks tone controls, but because you can never get (or want to get) close to a notional original sound, if the original sound is so vexatious.

I wish I were alone in voicing this dissatisfaction with recorded sound, but sadly the numbers of dissenters are growing. Way back in March, I spoke with Brian Morris of Linn about the terrible nature of modern recordings. We spent a few minutes wondering why the sound quality of new releases is so poor, until one of us started thinking of the distinctive white earpieces of an iPod. Then, all the pieces slotted together.

The download generation have no preconceived notions of quality music. Sound arrives like an email to their music server software, is unpacked and dispatched off to their portable hard disk player. The entailed perception of quality disappears along with the physical purchased disc; if it's downloaded, thereby shaving some price off the CD cost, it's expected to be in compressed form.

Those actually producing the music have got wise to this shift down in quality, and cut the music to maximise its performance when played through AAC, MP3, Real Audio or WMA codecs. This also assumes the music will be played through something considerably less wonderful than full-range speakers. We as audiophiles are reduced to fighting a rear-guard action, trying to get the best out of the data carrier, with the tacit assumption that the music itself is almost irretrievably compromised by being processed and compressed.

What's really potentially frightening is that this could be the last of the good times for music replay. Increasingly, file-sharing is working its way back up the creative chain via mastering and mixing to the actual performance itself. With musicians now working "together" without ever meeting face to face, portability in the recording process becomes ever more desirable. If we really are in the handover period from CD to downloads, the inevitable conclusion for the music companies is if they can make cash from data-compressed downloads, why bother spending more money producing high-quality CDs, especially if sales are down? With the

▶ recording suites making download-friendly edits with audio compression at source to make the data compression and subsequent listening through iPod headphones a less bumpy ride, what reason would there be to produce a less compressed version for curmudgeonly old gits like me?

Another potential concern about downloaded music is its impermanence. The very nature of owning a physical disc (especially an LP but this still applies to CD) means the person has to place this somewhere, amid a physical collection of other discs. Over time, this collection builds (and takes up plenty of space) and – although occasional prunings take place – builds over the decades into a soundtrack of your life. Not so a downloaded track... you don't like it, you get bored with it, you delete it! Or you file it away in a long forgotten sub-folder, for deletion or crashing at a later date. There is no physical ownership bestowed on the downloaded track, it's just another file from the internet. Why is this a problem? When listening sessions take place over an extended period, they often involve delving into the back catalogue. This is one of the great pleasures of music and owning a collection, but this will never happen if this back catalogue is just a folder awaiting deletion.

There's a dire need for some education, here. We as audio-philes need to teach the software manufacturers that they aren't 'manufacturers' of 'software', they are 'producers' of 'records'. We need to teach them why quality still counts (although I suspect we have lost this battle in the pop world, if this were ever a battle to be fought) and we need to teach those who think music begins and ends with a USB port just how good music can sound through even the most basic hi-fi system. Yet, I doubt this will happen because we are the only interested parties and we aren't doing it. The download generation will simply forget about real hi-fi for a good few years.

But, despite all this, we continue to press on with believing the world is really good and kind to us audiophiles, and sound quality keeps getting better – and still even matters. Or, maybe I'm entirely wrong about the world of hi-fi; both Denon and Onkyo have optimistically started back down the stereo route of late, and others will follow. One thing's for sure, though: Dr. Pangloss really was an audiophile, after all.

## Euro Directives

WEEE and RoHS; They sound like childhood diseases ("It's nothing to worry about, Mrs. Scraggins, it's just WEEE. They all get it this time of year!") or perhaps obscure, icky sexual predilections. In fact, these two combined could spell even harder times for hi-fi.

The pair are European directives; WEEE stands for Waste Electrical and Electronic Equipment, RoHS covers the Restriction of Hazardous Substances – actually, it's full title is "EC Directive on the Restriction of the Use of Certain

Hazardous Substances in Electrical and Electronic Equipment", but that sounds too much like a 17th Century tract on Metaphysics. Combined, the two acronyms spell out increased purchase prices on products and squeezing out the little guy.

WEEE is the most commonly known of these two directives. In this environmentally-huggy, heavily cosseted world we live in today, it's important that those who make things should be responsible for their correct recycling. You build it then it's up to you to dispose of it, so the logic goes. As such, from 2006, European manufacturers of electronic and electrical gubbins – or their agents, importers and distributors – have to have a strategy for the disposal and recycling of equipment; not only products designed in the 21st Century, but retrospectively disposing of any product built in the last decade.

Now, here's where it gets tricky. Okay, there's no problems walking up to your Naim dealer – for example – and dobbing in your 1996-vintage SBLs that the removal men used as a battering ram. But what happens when you want to recycle that Onix amplifier or those TDL speakers? Well, it's back to the Naim dealer again... Companies are beholden to dispose of products in proportion to their standing within the industry. The big names in audio have to recycle the lion's share of the products, even if the products have no connection with that particular big name.

Ultimately, this extra burden on manufacturers and distributors will spell increased costs, which will ultimately end up with the consumer. The phrase 'stealth tax' has been used. Consumer Electronics industry organisations, such as the British Federation of Audio, have suggested placing a visible fee on all invoices to both cover the WEEE costs and keep things transparent. However, as of going to press, it looks like our WEEE is cloudy.

RoHS is less publicised, although larger companies are actively changing their working methods to encompass the directive. Here, as of the 1st July 2006, certain substances will be strictly verboten in all electrical and electronic products. These include mercury, cadmium, hexavalent chromium, polybrominated diphenyl and lead. So maybe few of us will lie awake at night wondering how to eliminate the hexavalent chromium from our lives, but how many components in your hi-fi chain use lead solder? As of the middle of next year, lead solder will be effectively illegal. For larger manufacturers, this poses no problem; flow soldering technologies have made this a non-issue for some time. Now, consider the smaller loud-speaker manufacturer? How is a start-up company supposed to solder a crossover together without lead solder? Lead-free soldering stations are more expensive than a soldering iron and require greater heat. Heat that can crack a PCB. And that leaves aside hard-wired construction...

There is another issue here. The lines of communication between Europe and the rest of the world – particularly ▶



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## Some Digital and some Analogue news. And, don't forget the upcoming Heathrow Show ..!

Just because we are predominantly an analogue, vinyl based, retailer doesn't mean we don't care about digital. We realise that our customers, much as they love their vinyl collections, still need to play digital media occasionally! It's a pity that SACD never achieved the prominence it ought to have. But then, the choice of music is still very limited. Or, perhaps it's the other way round.

Anyhow, when you get a good recording, SACD can be stunning. You guessed this was leading somewhere, and it is! Musical Fidelity have at last released their new trademark sophisticated choke regulated and CD circuits and their power supplies. Too often, when you buy a really good existing expensive CD player to get the player gets the absolute best out of both



dual purpose machines on the market. Other details include technical specs (signal to noise ratio and jitter) which challenge the resolution of measuring instruments, and the ability to switch between two very high quality output stages, valve and transistor, to keep both camps happy! This is their best digital player yet, and one which it will be very hard to surpass (despite what MF say in their regular newsletters - existing owners know what we mean!) - if you are interested, don't delay in hearing it as I think the limited production run will soon all be allocated. Oh, nearly forgot, the price is a whisker under £4000 -

very good value indeed when you see (and hear) what you get for the money.

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

Our main business, in case you were wondering, is definitely still analogue! And, we have some exciting news on the turntable front. First, the affordable: the Michell Engineering editions this month!) turntable, loosely based looks completely different, with a jet black special black version of the acclaimed of the HR power supply. It also has nickel the Orbe. This special model, which only needs stunning looking but very competitively thing is the exclusivity - only 100 pieces are



become collectable. And, sadly, due to copy dates, by the time you read this we suspect there may not be many left, so please phone for current availability.

have released a limited edition (it's all limited on the famous Gyrodec. However, the Odyssey acrylic base, black chassis, clear lid, and a Tecnoarm A, finished off with a black version silver weights, and a clear acrylic spyder like a cartridge to complete it, is not only priced at £2150. But, the most interesting being made. They will almost certainly

The other exciting news is the arrival at our shop of the brand new flagship turntable from Nottingham Analogue, the Deco. This model is about as exclusive as it gets, the price alone will assure that! Mass is very high, and the platter features a unique contoured design to aid energy dissipation. If you want to know more (and hear it) you'll have to pay us a visit.

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

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

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

air tangent amazon amplifon apollo furniture argento audible illusions audio aero audio physic audiovalve black rhodium breuer dynamic brinkmann cartridge man cawsey clearaudio consonance decca london duevel dynavector ear yoshino final lab goldring graham (tonearms) graham slee hadcock heart hyperion (loudspeakers) incognito isolda jadis kr electronics klimo koetsu lavardin lyra magneplanar michell engineering morch musical fidelity nordost nottingham analogue opus 3 origin live ortofon pro-ject rega (turntables) revolver ringmat roksan shun mook shahinian shanling shelter slinkylinks sme something solid sonneteer spendor stax stirling broadcast sugden sumiko tannoy tci cables tom evans townshend audio transfiguration trichord trigon van den hul voodoo wireworld xlo

▶ the US and Canada – have not been as good as they were with the CE mark. I suspect engineers the world over know these directives are coming, I also suspect some of these rulings are being dismissed by manufacturers as being Euro-madness. There is some NIMBYism about WEEE; the directives do not concern American companies directly, just their agents and distributors in the EU. Of course, this all changes if the company imports direct, and could have ramifications if a company has been caught grey importing. In fact, the only way to accurately police the WEEE directives may be to monitor the grey importing activities of those outside the EU zone; picking up the tab for companies that no longer exist is the responsibility of those still in business. However, picking up the tab for companies who are exempt from the WEEE directives because of geography is desperately unfair. But, whoever said ‘fair’ was a function of pan-European business directives, anyway?

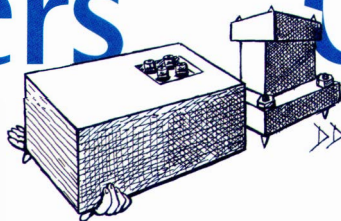
Both directives are aimed at the computer industry, and it's not hard to see why clean-up procedures are required here. Few personal computers are used for more than five years and all sorts of obscene heavy metals have been used in the manufacture of computers in the past. Not only are computers casually pumping toxic fumes into the workplace, but their legacy hangs around in landfill like a fart in a camper van. In the last decade, I must have gone through at least five desktop

computers and three laptops, plus untold mobile phones, PDAs, calculators, DECT phones and a couple of digital cameras. Of this catalogue of dumped technology, most fell from grace because they were outmoded, failed to work as advertised or simply crept into ever slower and slower use under the weight of bloatware. Very few components actually died in service.

Yet, were it not for the inevitable through-put of hi-fi entailed to the job of reviewer or the permanently febrile state known as being an audiophile, I would have likely gone through maybe one cycle of audio products, possibly less. People used Hasselblad, Nikon and Leica cameras for decades, because they were robust and mechanically sound; today's digital camera purchases have a life span of less than five years before they are rendered effectively obsolete. Strangely, the pace of development in computer technology has slowed a little of late, yet the replacement mentality of the IT literate hasn't followed suit.

All of which means, while it's a good idea to prevent toxic chemicals getting into landfill sites and it's a very good idea for people to take responsibility for safe recycling of products, perhaps what's really needed is an attitudinal change. Instead of changing product every two years, people should expect to change their PCs and phones and cameras every five or ten years, just like we do with hi-fi. ▶+

# Speakers Corner



by Paul Messenger

Focal JMLab is one of the most interesting speaker companies around. While still smaller than European market leader B&W, Focal's proprietary drive unit technology means it's one speaker company that seems to be mounting a real challenge for technological superiority through engineering innovation.

In the mid-1990s, Focal's original Utopia line set down a marker range that did much to establish the loudspeaker 'high end' that we know today. Then in 2002 it upped the ante with a brand new flagship series. It looked very similar to its predecessors, but featured seven years of developmental improvements, capped by the introduction of a unique tweeter based around an inverted, pressed beryllium dome diaphragm.

It's interesting to note the parallels with B&W's recent initiatives: the upmarket Nautilus 800-series were introduced in 1997, and then followed by the new diamond dome tweeter equipped 800D-series in 2004. The latest series also introduced sandwich cone construction for their bass drivers, something first seen in the Utopias. Both companies have also moved towards far simpler crossovers.

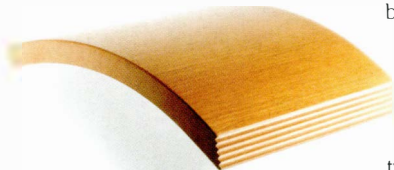
The parallels go even further, as one of the key features of the new B&Ws was to redesign the tweeter suspension to lower its fundamental resonance, and that's just what Focal has been doing to its own very different tweeters for the two new ranges we were shown.

Focal's top end Utopia and budget Chorus and Cobalt ranges are continuing unchanged, but the models that ▶

▶ occupy the upper middle sector of the market – from £1,400/pair up to £4,000/pair – are completely new in nearly every respect. But the biggest change is seen in a new appreciation of the vital role that styling plays in today's marketplace, reflected in two radically original and attractive new approaches.

The Profile models fit into the slots previously occupied by the Electra 900s, but feature the most dramatically different styling. Viewed from above, the speaker has a curvaceously elliptical footprint, but the backward-tilted front panel that mounts the drivers is a flat section that slices the top surface roughly in half, but takes

a much smaller slice out of the base (depending on model). The grille is cunningly shaped to make the front look concave, while the tweeter stands exposed at the top, mounted on a cast shield.



There are three stereo pairs in the range:

the £1,400 908 two-way stand-mount, the £2,000 918 two-and-a-half-way floorstander, and the £2,800 three-way, four-driver 928. All use new versions of the company's 'W-Sandwich' cone drivers mated to a newly developed version of the budget aluminium/magnesium alloy inverted dome tweeter seen in the Chorus speakers. The latter borrows a new Poron foam surround from the upmarket beryllium tweeter to drop its resonance from 1.45kHz to 1.18kHz and reduce the distortion at the lower end of its operating range.

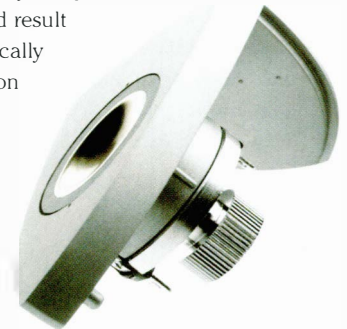
Creating the elliptical enclosures posed some difficulties. The usual technique of filleting one side of a single sheet of MDF in order to wrap it into a curve unacceptably compromised rigidity, especially given the narrowness of the footprint required. Instead the veneered enclosures are formed from six laminated layers of 2.5mm HDF, curved and glued in a technique similar



to that used for cold-moulding racing dinghies or furniture. The resulting structure delivers a fine combination of strength, rigidity and damping. The grilles are built on a complex injection moulded frame that's designed to minimise acoustic interference, especially as regards dispersion, one performance parameter that receives increased

attention in both new ranges. The

almost heraldic appearance of the new tweeter's front plate stands slightly proud of the baffle, blending perfectly with the subtly sculpted lines of the grille itself. The end result is a speaker that looks dramatically more attractive with the grille on than without, for once a reflection of the successful and coherent overall styling rather than an ugly or poorly finished baffle. The healthy dose of solid engineering and the sheer

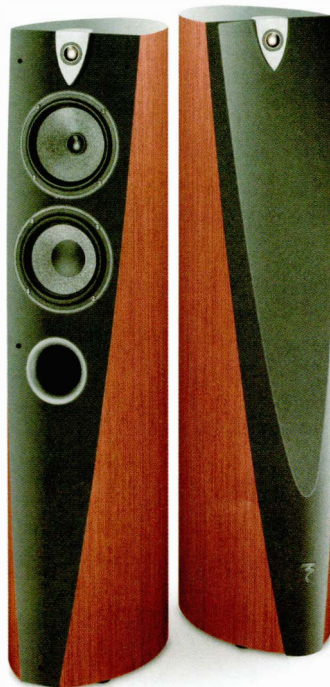


excellence

of the drive units means that this should be one range that gives nothing away on sonic grounds to achieve its undoubted aesthetic appeal. Competing in a crowded and massively important sector of the hi-fi and A/V crossover markets, the Profiles look like they'll be equally at home in either whilst significantly raising the performance bar in both.

In complete contrast to the notably non-threatening, "soft-tech" backward-tilting Profiles, the new and entirely vertical Electra 1000 BE models look altogether more up-front, with a strongly convex baffle that features a large, shiny and assertive metal tweeter mount that also promotes wide and seamless lateral dispersion.

Inspired by the rapid sell-out success of 2004's limited edition Electra 927 BE Signature, there are just two ▶





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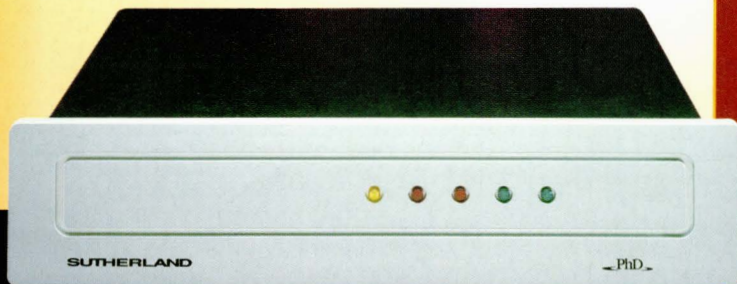
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— Wayne Garcia, *The Absolute Sound*, October/November 2003

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## A Brief Introduction

**Eastern Electric** is a joint venture between **US-based Bill O'Connell** and **Hong Kong-based electrical engineer Alex Yeung** which began when O'Connell met Yeung in the cyber world and eventually ordered one of his 5wpc MA-1 amps with RGN2504 rectifier and 6L6 output tubes.

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

Eastern Electric has received world-wide acclaim, awards and praise from reviewers and listeners alike.



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"Without endless money and a saint's patience for costly mistakes, you're far better off with something like the MiniMax."

"Yet another example of a true value product that's intelligently packaged with just the right - and some unexpected - features. My hat's off to the golden ears in Hong Kong."

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Engineered for years of satisfaction with meticulous attention to detail, Alex Yeung has selected the highest quality parts and transformers made especially for his statement design of the Eastern Electric M520 integrated amp.

With the design of the M520 we believe we have taken this circuit to reveal the absolute best musicality you will find.

What are you waiting for?

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Experience what extended frequencies really are.

From deep bass notes that delineate the bottom end of a great bass line to the crisp strike of a cymbal to the soft brush strokes on a snare skin.

Many different combinations of capacitors and resistors were auditioned until we found the exact mixture of capacitors from Europe and the highest quality audiophile grade components which sets the MiniMax apart from all other preamplifiers in sheer musical enjoyment.

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The MiniMax Phono Stage is a sophisticated all tube high end phono stage equipped with the highest quality permalloy core MC step-up transformers. With 57dB of gain, it will drive the most demanding of low output MC cartridges with ease.

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Carefully selected components housed inside its perimeters are second to none. Each unit is burned in for 48 hours to assure quality control before it even leaves the assembly plant.

The MiniMax Amplifier extols the recorded performance as it was meant to be heard. Singling out each instrument in its space and note duration of its tone and pitch. Why settle for anything less? Affordable High-End was our goal with customer satisfaction being its priority.

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Our latest creation in bringing the digital domain to the Reference standard that Audiophiles demand. This player will make you forget about your vinyl collection, or at least give you the alternative to choose without sacrificing what you love from your vinyl (analog) rig.

Have you been disillusioned with "Perfect Sound Forever" with your CD's? Our Tube CD Player will have you thinking maybe they were correct. No, we didn't roll off those shrill grainy high frequencies that other players exhibit, we engineered a way to successfully represent these extended frequencies.

Its essence is simplicity and attention to detail. The MiniMax CD player is the product of a company that firmly believes in the adage, less is more.

► Electra 1000 BEs (so far) – the \$2,300/pair 1007 BE two-way stand-mount and a \$4,000/pair 1027 BE three-way, four-driver floorstander. Both feature a newly developed and slightly smaller diameter version of the pure beryllium inverted dome tweeter, operating above new W-Sandwich cones. In the case of the midrange unit used in the 1027 BE it's an 'open sandwich', with a cone similar in structure to the ones developed for the Utopias. Both the glass layers are used, bonded together to form an ultra rigid front-face, which allows the foam damping to be applied exactly as required.

The new model tweeter employs a slightly smaller and thus lighter diaphragm than the one used in the Utopias.

It also includes massive vent slots to the sides and rear of the motor/suspension, allowing the back wave to escape more readily. Unlike most HF units, where the dome is driven from its edge, the Focal JMLab inverted domes use a smaller diameter voice-coil, more like a minuscule midrange driver. This offers greater rigidity but also means that the rear basket should ideally be open, again just like a midrange driver, to prevent build up of pressure behind the diaphragm effecting its free movement. Of course, the resultant backwave needs to be dealt with, but where the Utopias place the tweeter in its own sub cabinet, the new design incorporates a die-cast rear chamber (or 'Infinite Acoustic Loading' back chamber in Focal-speak). This not only uses foam damping to disperse the rear wave, but it further structurally reinforces the already massive metal tweeter baffle. The combination of all these developments along with the Poron suspension ring takes the unit's fundamental resonance down to 680Hz, allowing a low 2kHz crossover frequency.

The enclosure engineering is equally elaborate, combining a

50mm thick high inertia front panel with extensive bracing and front-to-back tapering (to spread internal standing waves). The baffle itself mirrors the radical curve established by the tweeter baffle, again to aid horizontal dispersion. However, the diameter of the drivers involved means that there is an inevitable overhang above and below each one. These have necessitated extensive shaping of the baffle apertures, creating elliptical outer limits around each circular driver and an inevitable aesthetic clash.

Once again, Focal's sophisticated injection moulding process comes to the rescue, delivering quite the neatest and most acoustically transparent sub-grilles I've ever seen – one for each driver.

Two things haven't changed, although

again, their execution has. Despite appearances, the 1027 BE is indeed reflex loaded, but by a carefully profiled and boundary controlled slot port, facing forwards between the speaker's feet. The

base applied to the port means that it should be unaffected by its distance from or the nature of the floor surface. Secondly, despite those resolutely vertical front baffles, both the 1007 BE and 1027 BE are time aligned, albeit within the crossover rather than mechanically. Focal claim that the improved dispersion achieved with the radically curved front baffle actually minimises the degree of time alignment required and that this can easily be achieved without

compromising or over complicating the crossover. In a further nod to the Utopia line, neither of the new BE models

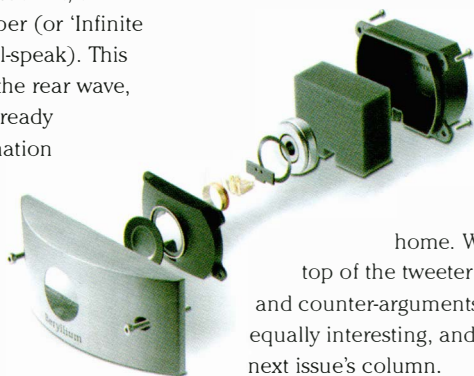
features bi-wired terminals. There's also a

sleek new aerofoil section stand for the two-way, which looks like a vast improvement on the old one.

These new Focals really do seem to have ticked all the boxes, so I'm very much looking forward to trying them out, and particularly intrigued to see how the new beryllium tweeter stacks up against someone else's diamond device that I've been enjoying in recent months.

At around half the price of their Utopia equivalents, the new Electras might even cause a few blushes closer to

home. With hi-tech materials back at the top of the tweeter agenda the technical arguments and counter-arguments about the various materials are equally interesting, and could well form the topic for next issue's column.



# FORTHCOMING EVENTS

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New Technology  
2 Day ShowShop  
October 8-9 2005  
Radisson SAS, Glasgow

## The Scottish Show

8-9 October 2005  
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(formerly The Scottish HiFi & Home Cinema Show)  
Radisson SAS  
301 Argyle St, Glasgow G2 8DL  
Opposite Central Station  
Tel: 0141 204 3333

**Northern Sound & Vision**  
The Quality Home Entertainments Show

Radisson SAS, Manchester Airport  
28 - 29 January 2006

## The Northern Show

28-29 January 2006  
**7th YEAR**

Radisson SAS Hotel  
Chicago Ave, Manchester Airport  
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**The Heathrow High Fidelity Show**  
1-2 April 06 SHOW

Park Inn, Heathrow

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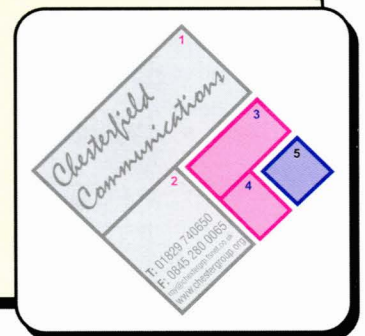
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soul of the artist,  
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capacity to evoke a  
similar emotion in  
the observer”***

*Wassily Kandinsky*

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# Incoming!

Please address letters to the Editor at Hi-Fi+, Unit 12 Albany Business Park, Cabot Lane, Poole, Dorset, BH17 7BX.  
or via the web-site at [www.hifiplus.com](http://www.hifiplus.com)

Dear Sir,

I've been a reader of your excellent magazine for quite a while and I'd like to thank you and the rest of the writing staff. I specially appreciate the great lengths that you go to explore each piece of equipment, speaker, cables, and tweaks. The magazine has either taught me or pointed me the in the right direction to learn about acoustics, music, music reproduction, and the science behind it all.

I'd like to ask if it would be possible to write more about how you approach each review and how do you actually listen. I'm especially interested in the procedures and processes that you go through when you audition a piece of equipment.

Kind regards

**Rico Trevis**

Brussels, Belgium

*It's something I've been considering for a while now. In fact, I think that just such an article is long overdue. I can't promise for the next issue but I'll get onto it sooner rather than later. Ed.*

Dear Sir,

I thoroughly enjoyed your recent article on the Eminent Technology LFT 8 speakers. Fortunately I currently live in Florida and have contacted the nearest dealer in Sarasota for a pair. I am however still unclear about your recommendations for a suitable amp to do these speakers justice.

Sincerely

**Al Dadrat**

Via e.mail

Dear Sir,

Last months April HiFi+ was boring – this months looks boring and so does next months. I will buy them anyway as I have bought every issue since issue one. How many loudspeaker reviews do you think we can stomach – I believe they are the least changed hi-fi component and most of them are just a couple of drive units screwed in a box.

Why can't we have more turntables, arms and cartridges – more audio history – more controversy – more systems – more diy – more manufacturer interviews? There are lots of weird people out there doing all sorts of strange things with hi-fi you

could tell us about: reviews of valves – supports – components – readers systems, anything but endless speakers.

I love speakers, owning Klipshorns, Voigts, LS3/5As, Tannoy Autograph, Quad ribbons etc – there are interesting ones out there but they are few and far between. Mostly they are the same boring old designs.

Please, please be more adventurous!!!

Regards

**Colin**

Via e.mail

*As a magazine we do our best to bring you unusual and innovative products. We are the only British magazine that will review products that aren't even distributed in the UK. We review more turntables and analogue replay equipment than any other UK based magazine; we interview more designers and manufacturers than any other UK magazine – about soft-ware as well as hard-ware. Yet every time we step away from straight reviews we get a torrent of mail telling us to stop wasting our readers' time or insulting their intelligence. You really can't please all of the people all of the time!*

*Having said that we try to strike a balance that keeps things both current and entertaining, informative and intriguing. Yes we have reviewed a lot of speakers recently, but that's because we've seen some incremental but important advances in speaker performance, linked in turn to either new or new applications of technology: Current developments in tweeter diaphragm materials stand out as the obvious example. The problem lies in not just assessing these new developments but in placing them in context against more conventional alternatives. This industry has a long history of blindly adopting new technology in a mad panic not to miss the boat, rather than taking a calmer and more measured approach that examines the genuine, musical benefits as well as how appropriate that technology is to a given situation or price point. How long before we see a (Chinese built) Wharfedale Diamond Diamond – and would it be a sensible use of such a tweeter?*

*In the past, we've jumped on too many band-wagons way too quickly: transistors, CD, metal-dome tweeters. The reason we surround such new developments with existing equivalents is to remind people that new isn't always better, ►*

► *and that in reality, there's really very little that's genuinely new at all! Hopefully you'll enjoy MC's examination of pistononic speakers and their theoretical advantages and disadvantages. It's exactly the sort of piece which provides a sensibly questioning approach to new technologies (as well as pointing out just how new they really are).*

*But never fear, we're moving on to pastures new so you'll be seeing a few less speakers in future. Ed.*

Dear Sir

I recently came across the perfect definition of the ultimate in hi-fi, which is not "you are there" but rather "they are here"!

Regards,

**Ron Kirkpatrick**

Via e.mail

Dear Sir,

Greetings. As an LFT8A owner, I thoroughly enjoyed your articles about them. I would encourage audiophiles to take your glowing recommendation one step further. Shall we say, the Eminent Challenge? Which is to run them "stacked" or in double pair configuration.

I first saw this suggested in a review where it was compared to the 1980's Infinity RSV reference speaker system, which cost approx. \$40,000. THAT got my attention. So, I tried it - doubled up the amps (now I'm running four speakers, all bi-amped, which required finding a pre-amp with dual main outs), cables, etc. Words can hardly convey the qualitative change that produced! Bigger, bolder, B A D D E R!

And yet more graceful, detailed, holographic. It's kind of like a planar equivalent of the KEF Uni-Q driver on steroids. I really liked the sound of them as a pair, but stacked, I'm totally smitten by them. Paired with a quality set of sub-woofers, the low end is treacherously big. One can adjust the mid/highs on both pairs of speakers to suit individual tastes. Purists may scoff at the idea, but the audiophiles I've had listen to the system are stunned at the presentation. One last comment; you're absolutely right about power and not needing extremely high-end amps. I'm using Outlaw Audio multi-channel amplification. It might just be the budget amp you're looking for to drive them. As a single pair, they are giant killers; stacked, they slay legions of giants!

My system (pertinent 2 channel components):

Rega Planet 2000, Rogue Audio Magnum 66 pre, Outlaw Audio 750 and Outlaw 755 multi-channel amps, 2 pair Eminent Tech Speakers, 2 Vandersteen 2W subs, Harmonic Technology Pro 9 and Pro 11 cabling, and interconnects

Blessings,

**Doug Schroeder**

Via e.mail

Dear Sir,

So what did I learn yesterday?

Well, 2 new words courtesy of the Hi-Fi+ Montreal report – absolutely (not in my dictionary) and copasetic (which is, but spelt not with an 's' but a 'c'). (Unfortunately it's not in mine. Ed.) Excellent! Now I can tell my wife that I am not reading just another hi-fi magazine, but one what also improves better my vocabulary.

So what did I learn the day before yesterday?

There is more going on in my hi-fi than I had realized. You see the electrician came to replace the house main fuse box with a modern consumer unit that has MCDs and RCDs. He also improved the house earthing, and replaced the twin socket behind one speaker that is used to power the telly and hi-fi. Was there an improvement? Yes there was, and as you have been preaching for ages about the quality of the mains power that reaches the hi-fi, that's no surprise. But, and yes there is a but, my speakers (QLN Splitfield Monitors) now affect the colour of my old tube telly. A known affect for non-magnetically shielded speakers sitting 8 – 10 inches either side of the tube, so why did it not happen before, and only became apparent after the improvements?

The dilemma that it leaves is this – does one use one's speaker budget to buy a telly without a tube, or purchase shielded speakers to replace those that I currently quite enjoy? Of course, you could always send me your sales list, since the 22 pairs that you currently possess must take up a lot of space that I could help empty!

So what did I learn today?

I bought one of the other hi-fi magazines that regularly champions the cause of older amps and equipment. It was good reading for an hour or so, but that was it. When your magazine drops through the door, it usually takes hours and hours to read the thorough, in-depth reviews, and is something to dip into during idle moments. I even read reviews of the highly expensive gear, which could one day, make an attractive second hand purchase.

Oh, and a confession. After reading a review in your magazine, I purchased an amplifier without hearing it first! My excuse is that it was second-hand, half price and 500 miles away (at a reputable dealers). The Rogue Audio 88 proved to be exactly as reviewed, but only after listening for some weeks. That was when I realized it was configured in triode mode – a switch to ultra-linear snapped everything into focus and proved the amp to be the bargain you'd suggested. When reading your review I had been disappointed that you had not tried the amp in triode mode, but now I understand. Its replacement is likely to cost much more, so this time listening will be essential – unless there is a good review and a bargain to be had etc etc,

Regards

**Bob Last**

Via e.mail



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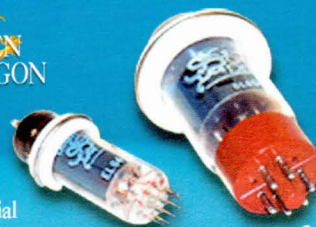
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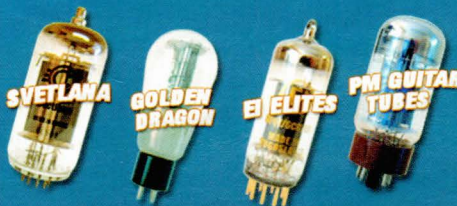
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# Enjoying the Season of Spargel and Land of Rain... The Munich High End Show

by Richard S. Foster

I was really looking forward to spending a lovely springtime in Munich in early May this year. Of course, just as has been my luck over these many months, every time I go somewhere it rains (or snows!). True to form, the weather gremlins were out in force in a soggy Germany. My luck is simply amazing, and no I won't mention how cold it was either... in May!

This was another first for me as this was the first European (as opposed to British) audio show I'd attended. Previously, I had wanted for many years to attend Frankfurt based upon all I'd heard and read about this continental hi-fi extravaganza. Quite honestly, I lusted for years over the many reports and pictures I'd seen, of unusual-for-me-gear that I simply had never seen and had no access to hear.

Well, politics and pressure on space forced the demise of the Frankfurt event before I got to fulfil my fantasies. The show moved to Munich in 2004, reportedly along with its fair share of teething problems (shipping containers for sound rooms, I kid you not!). Well, this year things certainly seemed to be back on track. Prefabricated demonstration rooms were doing a reasonable job, but as is always the case, those who offered active displays had to work extremely hard to massage decent sound from their environs. However, while some people questioned the quality of the show in Munich after the move there from Frankfurt in 2004, I was certainly not disappointed with what I saw and heard this year.

I must say that if you are a two-

channel audio person, this is one great show to attend. While there were some multi-channel surround exhibits, they were in the minority. I was really quite impressed with the 'family' feeling of the show, and it was quite nice to see young, married couples with (well-behaved) children in tow, looking and listening to the audio exhibits. These were not people just looking to have a weekend outing, these were people who really enjoy their music and seem to know what they're listening to. What chance of that in the US! Another observation that immediately caught my eye was that the various vinyl purveyors out numbered the CD/SACD sellers by a comfortable four-to-one margin! Not only this, but several of these dealers were not selling the new re-issues, they were selling top

▶ quality 'audiophile' (like RCA/Mercury/Decca/London, etc.) originals in addition to offering some great used and collectible rock material. This is not something I've seen at the two UK shows I've attended and certainly this is not the case in any of the North American venues I've visited. All in all, this made for the beginnings of a really nice atmosphere I've not experienced for many years.

There were of course, several Video displays and Sony was there with a couple of very impressive HDTV European premiers of a great DLP and Qualia 006 LCD rear projection set



I saw in Munich.

The venue for the show is the M.O.C., Munich Operating Centre, a purpose built expo centre that allows plenty of room for expansion. There are two floors above the main convention floor offering individual

rooms. These rooms vary greatly in size and they, unfortunately, suffer the problem of too much glass. This is a persistent flaw in this modern complex. However, many of these manufacturers, distributors and dealers have been here before and are phenomenally adept in squeezing great sound out of what might otherwise be a pretty but sonically dismal space. In some of the rooms I was really quite shocked as to how good the sound was.

I particularly enjoyed what I heard from Duevel. They had a small space and their omni-directional speakers were absolutely stunning. I found these speakers in a couple of rooms and since this was my first exposure to them, and even though the surroundings weren't optimum, I must admit I was quite impressed with what I was hearing. I heard their Bella Luna Diamante and Jupiter and I'm here to tell you these speakers did a fine job. My preference was the Bella Luna's but this is really just a first impression.

I also liked the AcousticPlan Veena loudspeakers, but felt they may have been better served using some different cabling. Even though they occupied a very difficult room, almost square, ▶



Duevel.

up in glorious multi-channel sound. Fortunately, I'd seen this same set-up in Montreal and, respectfully, the German Sony rep's presentation was not as dramatic as the one in Montreal. I gather HDTV is not yet available in Germany either through cable or satellite and this may be one reason why there was not the magnitude of Video that sometimes seems to overwhelm an 'Audio Fair'. We'll have to see what happens in the next two or three years, but for now, I was very pleased with what I heard and the little



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▶ I couldn't escape the feeling that there was more potential with these speakers. This is a very interesting design, utilising a dipole array design. The cabinet is rather different in the layering of narrow timber frames with a curved outer skin covered by several layers of glued veneer. This is a speaker system I'd like to investigate further.

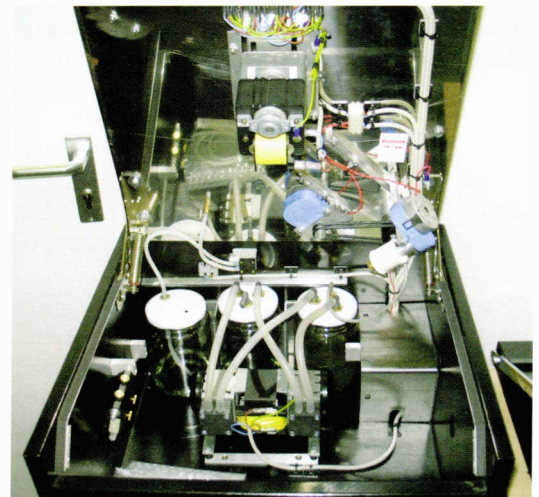
The people from Norma Hylee Tech were showing a variety of beautiful Thorens TD124 and Garrard 301 'tables



Nordost unveiled a new range of Mono-Filament interconnect and speaker cables. This is the same technology used in their Valhalla reference series. The cables are hand built and are terminated using WBT Nextgen gold-plated connectors. There were three new interconnects: the Heimdall retailing at £370, the Frey at \$550 and the Tyr retailing for £1100, all for a one-Metre pair. The matching speaker cables will be officially launched in September with prices to be announced. I listened to a quick demo and thought the cables were astoundingly good based upon my sonic memory of my Valhalla. Those Nordost guys love the gods of

placed in some really beautiful plinths and outfitted with the Tritonus ZA tone arm. Retro is very big in Germany and this was a fine example of great old stock components being rebuilt and offered in beautiful form. My congratulations on their highly creative display. Needless to say there was a

great looking Micro-Seiki RX-1500G on display as well as a grand Thorens Prestige I'd never seen in the flesh before this trip. By the way, Ingmar Drews' Keith Monks record cleaning machine was something that looked as if it would outlast us all. Stunning build quality!



Keith Monks meets modern technology.

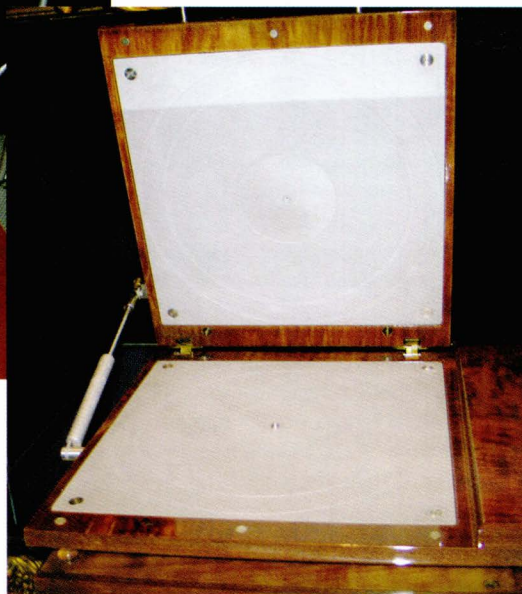
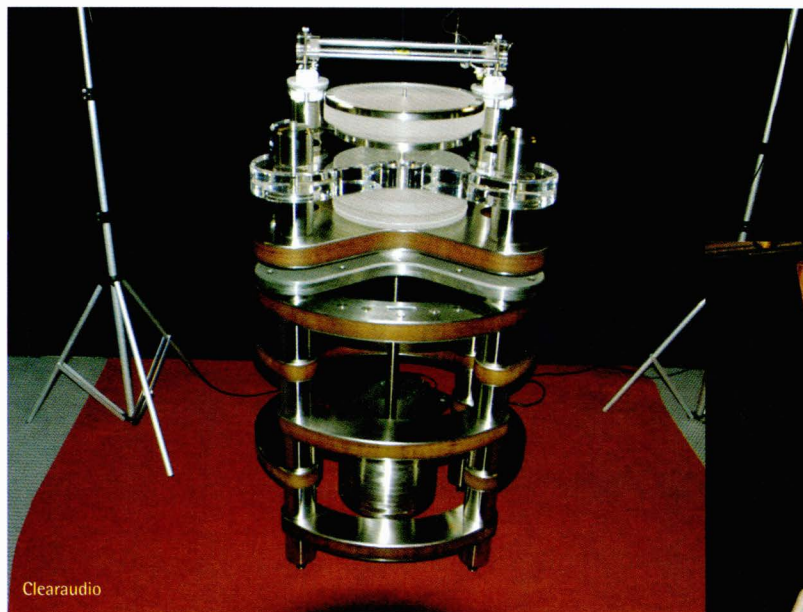
► Norse mythology! Each price range also includes a dedicated tonearm lead available terminated in phonos or with a 90-degree mini din connector!

As many of you may know, there is also a mono-filament OEM product for internal arm wiring that made its first appearance with VPI. I've got one of my JMW 12.6 wands wired

Clearaudio were there in force with a static display of all their turntables, culminating with the latest evolution of the Master Reference 'table and linear tracking arm, which I believe retails at about 90,000 euros. I also spotted what is being called the Vinyl Doctor, a record flattening device said to have some innovative heating parameters

industry products was simply astonishing. No wonder those manufacturers who export to Germany constantly complain about how finicky their distributors are if this is the standard of the products in their domestic market. They put most of our Anglophone manufacturers to shame, both in terms of quality and inventiveness.

Well it's that time in the report where you get down to talking about the better sounds you heard. There were several to be sure. One product that really held the audiences' attention was the Martion Audio Systems



with the prototype wiring and I can tell you that it's outrageously good. Harry Weisfeld says the production product is even better! I can't wait for VPI to get me the real deal and to also replace the cabling in my termination box with this new wire. At that point my system would be Valhalla from the tonearm straight through to the AC power cords! Fortunately the new ranges open up the same possibility to listeners with less elastic budgets. How good are the new leads? Closer to the top of the range than you'd suspect from the prices, closer than might be comfortable for the manufacturer; just where do you go after Valhalla?

Audio Physic were making promising noises with their extensive 2005 product range, no great surprise given their established reputation.

as well as definite distinctions for ten and twelve inch records. Robert Suchy promised to send one as soon as the production run is ready to go.

A very interesting aspect of the show for me was seeing how visually striking and creative many of the manufacturers were with their product placement. The physical displays were very enticing and you really wanted to look and "feel" the products. Clearly with the number of potential real world shoppers passing through the expo, this made lots of sense. The product presentation in Germany was far more sophisticated and thoughtful than exhibits I've previously seen. Likewise, the standard of fit and finish on even cottage

loudspeakers. Located in the Opera Audio room, with amplification by Consonance, Basil Martion was getting stunning sound from his gorgeous Orgon loudspeaker system, but what really impressed me were his small Bullfrogs. These small horn speakers really boogie and I think they are unbelievable bargains. Well-done Mr. Martion. (<http://www.martion.de>)

My favourite sound was a bit of a surprise. It was in the room where I met an old associate, Joachim Gerhard. I had heard his smaller Allegreto speakers in the Loricraft ►



Martion Audio.

► room and although the room was, to say the least, packed, I was impressed with their coherence and tonal qualities. The larger speaker system is called the Alegra and retails for €5980 (pictured). The Allegretto sells for €2000 less. As many of you know, Gerhard was the founder of Audio Physic and left the company a few years ago. Well not only is he back, he's learned a few new tricks. It was great to see him and he's really

designed some excellent sounding speakers. I'd suggest you keep your eye, actually your ear on this company. Hopefully we'll be getting one or both of these in for review. (<http://www.sonicsonline.de>)

I'd like to thank Frank Schroeder and Christoph Koelle (the former the manufacturer of the great tone-arm bearing his name, the later a general all around nice guy who works with the folks at Loricraft).

Their graciousness and hospitality for taking me under their collective wings and acting as my dual German to English translation and cultural services advisors was invaluable. I couldn't have done this without them. I'd be remiss if I didn't mention how many seminars the High End Society put on over the four-day period – more than three dozen! All well-attended, this is another lesson for the English language exhibition organizers.

All in all, there were more than 167 exhibitors offering in excess of 500 brands covering more than 14,000 square Metres! While there were plenty of active rooms with this many distributors, as mentioned earlier, the sound quality was mixed and only a few were able to really get it done properly. After all, it's an audio show. I'd say there were more static displays than equipment in actual operation. The Munich show

is definitely a business environment where many manufacturers and distributors come to meet and talk products as well as demonstrate them. But with such a vast array of exhibits there was plenty to see and do and I really enjoyed myself at this show. After all, you can sometimes learn more about a product or company by chatting to the people behind it than listening to a sub-optimum demonstration, and there was plenty here that piqued my fancy.

Oh, and by the way, as far as the Spargel? It's absolutely out of this world!



Joachim Gerhard's Alegra.

Harmonic Technology award winning cables are now available for sale in the U.K.

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Michael Fremer, *Stereophile*, April, 2003

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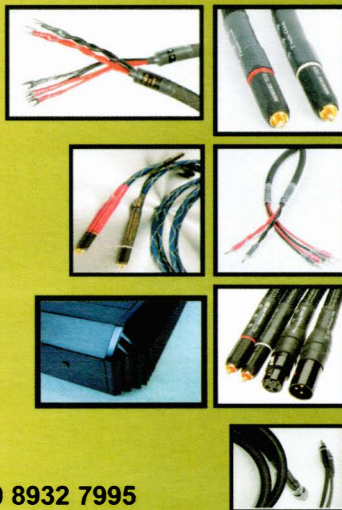
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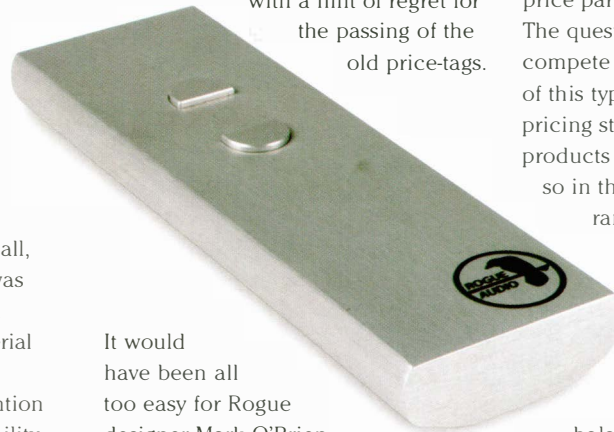
# The Rogue Audio Metis Pre-amplifier and Atlas Power Amplifier

by Roy Gregory

Expectation is a funny thing. Rogue Audio burst onto the scene with a range of high value, high performance valve separates. Built in the classic American mold, their designs combined useable push-pull power (at a time when flea-powered SETs were all the rage) with bluff, foursquare chassis. But look under the hoods and you found amplifiers that were far more than a simple rehash of the same old, established designs. These were a careful blend of sound design and technological and topological innovation. Best of all, at their attractive prices there was nothing tubed that could touch them for sound quality (or material quantity). The styling was just different enough to attract attention and the construction and reliability were both excellent.

Time passes and designs evolve. First came the Magnum versions, optional upgrades that ran alongside the originals. The problem was that they were so clearly superior that pretty soon no one was buying the originals. But the better tubes, better components and higher spec transformers all cost money which inevitably raised the prices. Finally, Rogue bit the bullet and rationalized the range, taking the opportunity to improve the aesthetics and standards of finish at the same time. The new models arguably offered even better value for money than the originals, but their newly elevated price-tags had lifted them into a rather different sector of the market, robbing them of their “ultimate audio bargain” status.

Instead they found themselves competing head to head with the brands and products that they'd originally undercut. And compete they did, but like I said, expectation is a funny thing, and I'm sure I wasn't alone in finding my admiration for the new models tinged with a hint of regret for the passing of the old price-tags.



It would have been all too easy for Rogue designer Mark O'Brien to point out that you get what you pay for – and there's absolutely no question that the latest amps are significantly better than the originals, more than justifying their elevated prices. But I guess it was pretty galling for him too, watching the first wave of Chinese built tube products colonising the market sector in which Rogue originally built their reputation. Time then to re-invade the budget high-end.

Given the price and presentation of current Chinese product, and O'Brien's insistence that the new products be built in the same Pennsylvania plant as the existing range, he was setting himself quite a target if he wanted to compete head on. Having said that, it's not like he hasn't learnt a thing or two in the

last few years. The products that have emerged – a pre, stereo power and an integrated amp – are special indeed. What is more, they're priced incredibly aggressively in their home market; which means no export margin to play with when it comes to overseas pricing, so don't expect price parity this side of the Atlantic. The question is, can they still compete given a pricing handicap of this type? Part of that aggressive pricing strategy means paring the products away to bare essentials, so in the US they are sold with a

range of optional extras, like a cover for the power amp and a metal (rather than generic plastic) remote for the pre-amp. UK distributor Audiocraft has sought to redress the balance somewhat by including those items as standard. There are other options too, but we'll get to those.

Let's start with the Atlas power amplifier. A push-pull design based on single pairs of EL34 output tubes, this classic configuration is built into a wide and slim chassis. Layout is conventional with tubes front and transformers to the rear, and it would be easy to conclude that this is yet another built to a price resurrection job. However, you'd be wrong. Between the tubes and the transformers you'll find a circular bias meter, and alongside it a cover plate that conceals switching and adjustment potentiometers for each of the output tubes. Yep, the Atlas is a fixed bias design. Why is that a surprise? Because the “self-

▶ adjusting” Cathode bias topology used in so many single output pair EL34 amps is both simpler and quite a bit cheaper to produce. However, O’Brien has incorporated the biasing arrangements familiar from his more expensive designs for good reason. Fixed bias might be more expensive but it

speaker connection. These can be internally adjusted for 4 or 8 Ohm loads by removing the top-plate and switching the transformer taps connected to the red speaker terminals.

sides to be lifted clear. Once you do that you’ll find the amp laid out neatly in the bottom of the base tray. The active circuitry is arranged on a single large circuit board, the transformers and reservoir caps fixed straight to the bottom plate. This arrangement “countersinks” them into the chassis making them appear far smaller than they really are. With the cover off you realise that Rogue have skimmed in none of the important areas.

The amp’s construction offers a few other hidden benefits. Servicing, should it ever be necessary, will be simplicity itself, while the low slung siting of the critical input valves means that they are further protected from airbourne vibration. The front-panel is finished off with a nice, brushed silver slimline panel with a classy, circular on/off switch.

Combined with the solid and nicely

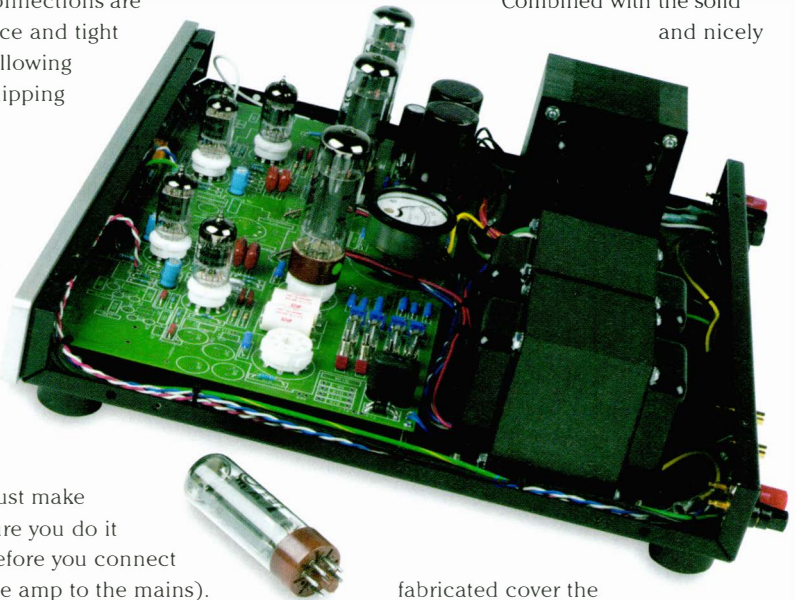


Even if the factory default setting of 8 Ohms suits your speakers, I’d still just check that all connections are nice and tight following shipping

also holds the valve tighter, allowing for slightly more output power and more importantly, a tighter grip over the low-end. Rogue rate the Atlas at 55 Watts, which is pretty healthy for a single pair of EL34s. They even go so far as to supply a proper bias adjustment screwdriver (so you don’t risk electrocution or accidental shorting) neatly stored in spring clips behind the mains transformer. And while we’re on the subject of transformers, it’s nice to see a mains transformer that’s considerably bigger than the output ones. It’s ever so tempting to enlarge the output transformers to get a grip on the bass, but it has a detrimental effect on the top-end and overall coherence. Nice to see that Rogue have relied on sound engineering rather than trickery.

The back of the amp sports a single pair of phonos for signal input and decent five-way binding posts for

(just make sure you do it before you connect the amp to the mains). The ones in the review sample were fine, but as I say, I’d still check – especially as it’s so simple. The double-U casework is held together by ten No2 Philips screws which enable the top and



fabricated cover the appearance belies the amplifier’s modest \$1195 price.

The Atlas is supplied as standard with Electro-Harmonix tubes in its output stage. Audiocraft offer the alternative of Svetlana EL34s at ▶

▶ a cost of £72 for the four (you receive them in addition to the standard tubes). Both options were supplied for review. Alongside the bias adjustment potentiometers you'll also find fuses for each output tube. These ensure that in the event of tube failure, you don't lose additional components too. It may not be the purist approach but it's certainly the sensible one.

The Metis pre-amplifier is arguably even more of a triumph. Pre-amps are always harder to get right in my experience, and the entry-level Model 66 pre was the only one of the original Rogue products that didn't knock me out. Well, that's changed now. The Metis is built into a wide, slim chassis that matches the front-panel



on the power amp. It's also a true pre-amplifier, rather than a line stage. Included amongst the list of inputs you'll find a (solid-state) moving-magnet phono-stage, offering 35dB of gain, and there's even a headphone output on the front panel. You get four inputs (including the turntable), one fixed output (for recorders) and one variable. All socketry is single-ended RCA phono. Controls consist of volume, balance and source select. Engaging the headphone jack will defeat the speakers, although some leakage is normal, so if you want the speakers totally silent then switch off the power amp.

Lift the lid and you'll find three, individual toroidal transformers feeding the phono-stage, heater filaments and HT. US models actually

have a single transformer carrying separate windings, the preferred arrangement in noise terms, and this will eventually filter down to the 230V models. The circuit itself is also slightly unusual, once again breaking the budget mould by configuring the output stage as a mu-follower rather than the simpler and far more common cathode follower arrangement. Just like the power amp, the Metis applies appropriate engineering to its task, relying on careful assessment of component quality and bulk purchasing (many of the components are used right across the range) rather than cutting corners to hit the target price.

The Metis offers remote control over volume and relies on a pair of octal-based 6SN7 tubes for gain.

These poke through the top-plate and are shrouded by a simple, silver painted cage. For me, this is the one part in the whole package that jars slightly. I'd go with black or dispense with the cover altogether, once the pre-amp is installed.

The size of the holes in the cage suggest that it's there to protect the tubes rather than prying fingers anyway – which is not a problem I suffer from. I'm sure end-users are more than capable of making up their own minds regarding this. In fact, the only operational gripe I've got is that the volume only remote control is a bit coarse in action. There again, I don't use such things so it doesn't worry me; you on the other hand might wish to check this out. But the best news of all I've kept for last: The Metis costs just £995 – for a full-facilities, full-width, remote control tube pre-amp that just happens to look pretty cool too. Now that's what I call a bargain, just so long as the sound hits the mark just as

## Extending the family... The Cronus Integrated Amplifier

Anybody looking closely at the photos that accompany this review will notice plenty of spare berths on the power amp circuit board. The dimensions will tell you that the two units' front panels are also interchangeable, so you don't have to be Sherlock Holmes to work out where the integrated amp fits in. Called the Cronus, it sells in the UK for £1595 and is almost literally, a marriage of the two separates. Obviously, the integrated uses a common power supply and adds an extra valve, in this case a 12AU7 twin triode in place of the twin 6SN7s. The pre-amplification circuit is also rather simpler, in part at least allowed by the fact that the operating envelope facing the circuit is totally pre-determined. So, whilst there are compromises, they are nowhere near as severe as you might at first suspect. On the other hand, you'll save yourself around £800 plus the cost of a decent interconnect, not to mention shelf space. Skimp on the interconnects that you use between the pre and power and you'll start to eat further into their margin of sonic superiority. With exactly the same facilities as the pre-power, including both the phono-stage and headphone output the Cronus looks like a seriously interesting option and a credible alternative to the likes of the Prima Luna.

squarely as the price does.

I used the Rogues to christen the new listening room, driving both the Living Voice OBX-R2s and the Reference 3A Da Capos from the power amp's 8 Ohm outputs. Right from the start this combination reminded me just exactly why the sound of a good EL34 amplifier is so appealing. The sound had that lovely, open, uncomplicated directness that makes listening easy and engaging. You don't need to do a component count here to appreciate just how direct the signal path is. Equally at home with either speaker, the Rogues came across as surprisingly powerful and capable given their price and power rating. But that power was ▶

▶ delivered very much in the style I've become used to from 34s: There's volume and dynamics, scale to the soundstage and a lovely sense of presence to the midrange – but it's the midrange that these amps are all about. Those more used to 6550s or KT88s will be looking for a greater sense of authority, more control at the frequency extremes (which is why Rogue use them in their more expensive designs). However, those listening to what this amp can do with a vocal will wonder what they're complaining about. And that's the point. Different output tubes deliver a different flavour and emphasis, a different set of compromises. The Atlas, in selecting EL34s for its output tubes, accepts the compromises that that choice entails. The 6550 isn't necessarily a better valve (although it is more powerful) but it is most definitely different. Where the EL34 scores its points is in the natural sweetness and flow it brings to the mid-band, scoring on the midrange swings what it loses on the rondabouts at the extremities. Any amp that uses this valve needs to exploit those abilities to the full and, like I said, this amp is a very good EL34 amp indeed. But its real beauty lies in the way that the fixed bias topology ameliorates the potential weaknesses.

So, now that we've established what this pre-power is, and more importantly, what you can expect from it, let's get down to the nitty gritty. There's an uncanny naturalness to the pace and timing of events presented by the Rogue amps. As obvious as this is with music it's also sufficiently natural to be taken for granted. Listen instead to some speech, like the studio banter that opens the Ryan Adams album *Heartbreaker*. The cut and thrust

of these relaxed, intimate exchanges is perfectly captured, the wry humour, so dependent on timing, beautifully preserved. The change in focus that happens halfway through is an almost physical change of direction. The whole episode makes perfect sense of an expressive mode in which we're submerged every single day. So that's one huge tick for a natural, believable mid-range then.

It's a performance attribute that's underlined every time you play a vocal. The winsome tone of 'Midnight Shift'



(Stewboss *Sweet Lullaby*) is spot on, but so too is the driving, insistent tick of the percussion that stops the song going syrupy on us. Harmonies are superb, whether the balance of lead and backing singers or the different kind of balance demanded by a duet. Sonatas enjoy a similar sense of rightness, violins holding their own against pianos, the latter never pushed back by the ego of the star soloist or an over cautious engineer. The Martzy *Kreutzer* on Coup D'Archet is a case in point. Played in this instance via the TNT 6 and Lyra Titan fed through the Groove Plus, there's no mistaking the presence and power of Martzy's bow work, even if the frisson of edge and tension betwixt hair and string is slightly muted. But that physicality in the playing is matched by the solidity

and stability of the piano part, suitably sonorous in support. It's here that you'll really begin to understand why this amplifier combination does what it does, and why, although it's the EL34s in the Titan that set the style (and arguably the limits) of the performance envelope, the Metis is far from a silent partner when it comes to defining just what happens within that envelope.

Splitting these two units is instructive. Running the Atlas with the Vibe increases the focus, resolution and transparency, but robs the sound of scale and presence. Not surprisingly, the Metis could never be described as

a high-resolution device, concentrating instead on placing the musical energy in the right place and ensuring that it doesn't lack for weight. It's an impressively dynamic and physical presentation that dovetails perfectly with the deft finesse of the power amp, ensuring that the whole becomes rather more than the sum of the parts. The end result might be wanting a little of the finest detail, but the overall transparency and above all, immediacy, is superb given the price. Its warmth depends in part on a slight rolling of the top-end; not enough to impinge on the sense of air and space, but enough to take the edge off surface noise and the rustle of 78s. The shimmer of cymbals is a little smoothed over and the resolution of the latest tweeter designs will remain untested, but frankly, it's not critical to your musical

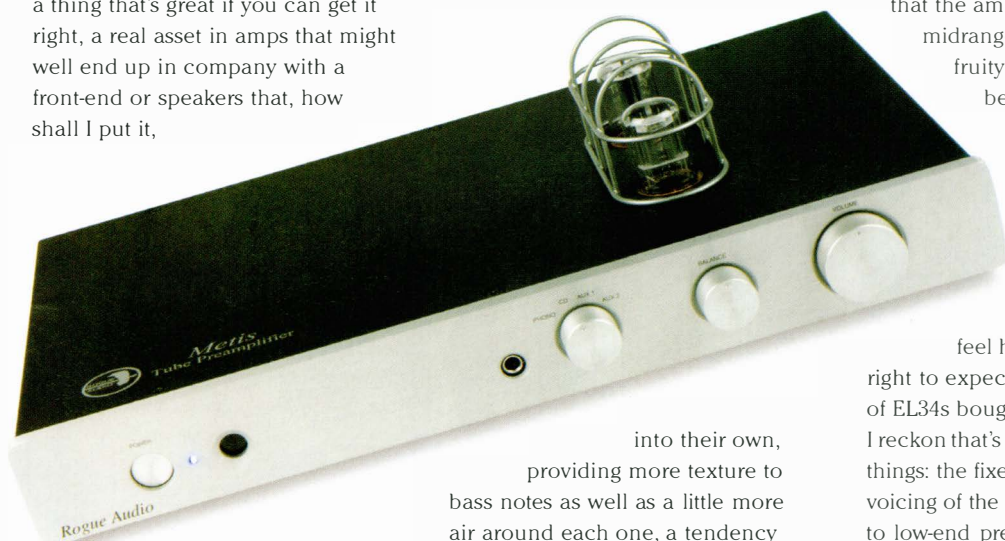
► enjoyment and can have a beneficial effect on certain CDs of my acquaintance. What's important is that instruments remain in place and in proportion to the rest of the stage so that the musical coherence and continuity remain intact. It's a thing that's great if you can get it right, a real asset in amps that might well end up in company with a front-end or speakers that, how shall I put it,

are nicely separated and again, the amps' uncanny sense of placement keeps their contribution musically relevant, never wandering off into a softened world of meandering irrelevance. Even so, this is one realm in which the Svetlana valves come

low-down robs the Atlas/Metis combination of a little crunch and impact compared to a good solid-state or better valve design. But that's a compromise I'll happily make if the upside is the directness of communication and immediacy that the amps deliver across the midrange. The rounded, slightly fruity bass gets the balance between weight and life just right: enough in the right place to keep things interesting, never so much as to cause problems.

There's more control, texture and feel here than you've any right to expect from a single pair of EL34s bought at this price, and I reckon that's mainly down to two things: the fixed bias and the careful voicing of the pre-amp when it comes to low-end presence and substance. Large scale orchestral works are handled with aplomb and a comforting sense of rooted stability that instills a relaxing confidence in the system's ability to scale crescendos and meet dynamic demands.

The onboard phono-stage is a welcome inclusion and in performance terms it's no make-weight. Used with a Shure V15Vx MR moving-magnet, it can't match the clarity, speed and resolution of a decent moving-coil and a dedicated step-up, but measured in more realistic terms, and like its partners in crime, it puts musical access and enjoyment ahead of hi-fi aesthetics. Easily capable of delivering a musically coherent and enjoyable performance from vinyl, it will happily meet the

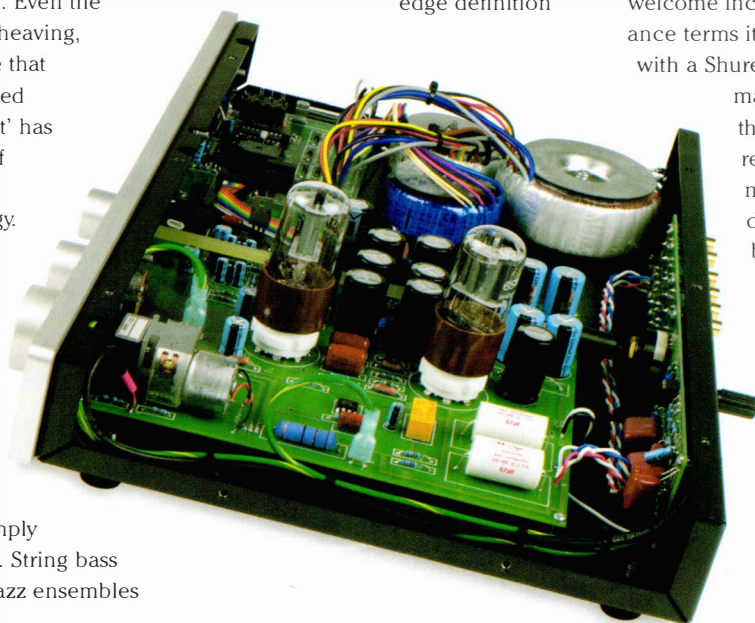


don't necessarily mind their Ps and Qs.

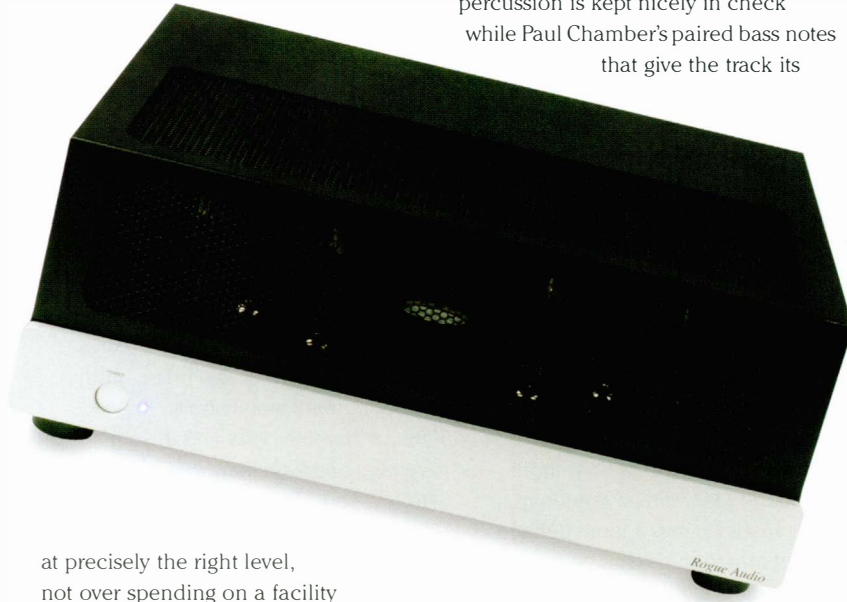
Having discussed the top, I guess it's time to look at the other end of the spectrum. Whilst leading edge definition is nothing to write home about, bass notes are spot-on for pitch and placement. Even the intentionally murky, heaving, undulating quagmire that underpins the re-mixed version of 'The Forest' has the requisite sense of emotive momentum and propulsive energy. There's a nice sense of the centre of musical energy, energy that ebbs and flows in waves, that ensures that the dense, multi-layered mix makes music rather than simply muddying the waters. String bass parts underpinning jazz ensembles

into their own, providing more texture to bass notes as well as a little more air around each one, a tendency that spreads up into a more defined and separated mid-band, with everything just a little crisper and clearer than before. Transients arrive with a little more snap, starting and stopping more precisely.

Ultimately, the lack of leading edge definition



▶ demands of replaying an existing collection or starting on a new one. Those more serious about their analogue replay will want a stand-alone unit, and the circuitry fitted within the Metis recognises that. Once again, Rogue have pitched the performance



at precisely the right level, not over spending on a facility where performance won't get used.

Which brings us back, seemingly inevitably, to that midrange. (Not surprising really considering that that's where 90% of the musically interesting information resides.) Let's look at something specific, and this time, something without a vocal. Let's take the title-track of Wes Montgomery's live album, *Full House*. Here you have a tight jazz quintet that's really cooking. The Rogues impart all the excitement and energy of the live event. The stabbed sax notes are full of insistent drive and purpose, chorusing with Montgomery's fluid lines and rapid sprays. The interplay between the instruments as well as the security with which solo lines are traced speaks volumes about the fluidity of the electronics. The rhythm section is rock solid allowing Wynton Kelly's piano the space to stretch out and explore, but the system never let's go its grip on the

musical lines or the momentum that carries the track along. Compared to the best there's a subtle loss of warmth, a slight yellowing of the tonal range that burnishes the guitar a little, slightly lightening the sax, but the effect is subtle and will pass unnoticed unless you really go looking for it. The busy percussion is kept nicely in check while Paul Chamber's paired bass notes that give the track its

distinctive feel are clear to hear. The hesitations and halts that punctuate the interludes between solos are handled with sure-footed ease, delivering just the right catch and emphasis. But what's never in doubt is the sheer fun these guys are having. This is a great line-up captured in 1962 at the height of their powers – and that's exactly what you'll hear through these amps.

What you have here is a thoughtfully balanced amplifier combination that hasn't got so wrapped up in its own internal workings that it's forgotten that music is supposed to be fun. Front rank immediacy, directness, and communication across the wide-open mid-band are massively rewarding in musical terms, flanked by bass that brings weight, gusto and sheer enthusiasm to the party and a treble that, whilst a shade retiring

isn't above adding its own witty contributions. The hi-fi credentials are all present and correct, they just aren't allowed to interfere with the primary function, the enjoyment of the widest possible range of recorded music.

In absolute terms you can fault their performance both at the frequency extremes and in terms of overall resolution: At their price it's ridiculous to quibble. If a hi-fi system should be about delivering the music then the Rogue Audio Atlas and Metis should carry the Carlsberg logo: The best budget tube pre-power? Probably..



#### TECHNICAL SPECIFICATIONS

##### Metis Pre-amplifier

Type:	Remote control, vacuum-tube pre-amplifier
Valve Complement:	2x 6SN7
Inputs:	3x line-level 1x moving-magnet phono
Gain:	12dB (line-stage) 35dB (phono-stage)
Outputs:	1x fixed 1x variable
Maximum Output:	10 V
Dimensions (WxHxD):	18 x 4.5 x 12.5
Weight:	6.5kg
Price:	£995

##### Atlas Power Amplifier

Type:	Push-pull, vacuum-tube power amp
Valve Complement:	2x 12AU7 2x 12AX7 4x EL34
Rated Output:	55 Watts
Input Sensitivity:	1.0 V
Dimensions (WxHxD):	18 x 5.5 x 17
Weight:	25kg
Price:	£1195

##### UK Distributor:

Audiocraft  
Tel. (44)(0)1895 253340  
E-mail. kevinwalker@audio-craft.co.uk

##### Manufacturer:

Rogue Audio Inc.  
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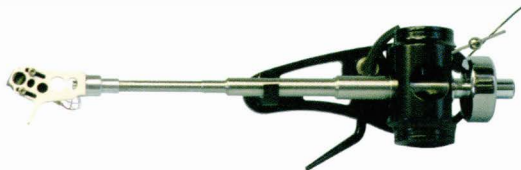
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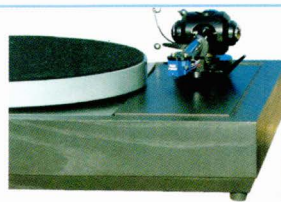
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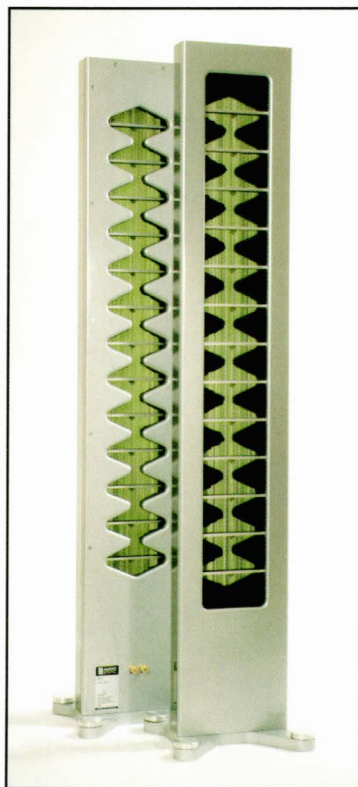
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# Renaissance RAP-02 and RA-02 Amplifiers

by Jason Hector

One of my favourite aphorisms is that no matter how much you polish a turd you can't hide the stink – and how apposite that is for Hi-Fi. No matter how shiny and beautiful the box is, no matter how many inputs and outputs, irrespective of the all-singing and dancing feature-set, if a product doesn't cut the sonic mustard then it is a crap product, a turd. Refreshing then that from the first glance it is clear that if the Renaissance amplifiers are relying on polish for sales they won't be too successful. These amplifiers are some of the least pretentious products I have ever used. Three plain boxes make up an amplification system consisting of a line-stage and two mono-blocs. There is also a stand-alone phono-stage that I hope will be the subject of a follow up review. All four of the boxes in this range share a common enclosure which exhibits, what can only be described as, "Eastern block chic" mainly the consequence of the rather cheap looking and feeling control knobs. The plain-Jane looks are somewhat alleviated by the lovely (but nowadays incredibly common) blue LED power indicators. The pictures show the silver finish and they are also available in black. At least in black the boxes don't draw undue attention to themselves on the shelf. Fit and finish of the coachwork is neat and robust, but nothing to get excited about and the boxes are also not the strongest around. They suffered noticeable twisting as I picked them up, the power amplifiers were particularly susceptible, as they are weighty and the weight is not evenly distributed. While this doesn't exactly fill you with confidence, sacrifices were clearly needed somewhere to achieve the selling price of two thousand pounds for the triplet. Because, after living with these products for a few months I am convinced that there are no sacrifices inside these cases, and the designers

have obviously kept the buffing cloth for the internals. No surprises then that the combination of two RA-02s and an RAP-02 is capable of portraying music and the interplay of musicians in an addictive and exciting way. They set your feet tapping, your hands clapping, you sing along... they are just plain good fun.

The pre-amplifier, the RAP-02 (which is £695 when bought alone) has one set of outputs and just four inputs selectable using one of the three identical rotary switches on the front panel. The remaining two are a rotary power switch and a volume control of unexpected type and quality. Unusually, especially at this price, this is a stepped attenuator based around a high quality Elma switch. According to the literature the control adjusts the gain in 3dB steps from -52dB to +14dB, plus a mute position, resulting in 24 discrete settings. Making or buying-in mechanical stepped attenuators is never a cheap option and this must have absorbed most of the total parts budget. The sparse interior is however misleading, and more a testament to the purity of the design than obvious cost-cutting. The gain circuits are built from discrete components and the active devices themselves are MOSFETs, all mounted vertically inside the rear panel to keep the signal path short. The pre-amplifier is run in pure Class A with no overall feedback. Unsurprisingly there is no remote control. The output impedance is quite high at 75 Ohms but the bandwidth is still wide enough from 20Hz to 100kHz +/- 0.1dB.

The RA-02 power amplifiers (which are £1499 a pair when bought separately) follow a similar design philosophy to the pre-amplifier although they are run in Class AB mode. They are executed with discrete components, the active devices are again MOSFETs and

there is no overall feedback. An RA-02 is good for 50Watts into 8Ohms with a bandwidth from 20Hz to 20kHz (+/- 0.2dB). The paper total harmonic distortion figures are a little high for a solid-state power amplifier at 0.1% with 10Watts of output and I guess this is a result of the lack of feedback. Surprisingly (or not since we rarely need 1 Watt let alone 50) the sound does not sound distortion loaded at all. In fact the clarity and transparency of these amplifiers is totally unexpected at this price. All of the socketry is of decent enough standard. Line-level inputs are via good quality phono-sockets and speaker outputs via chunky WBT terminals. Both products receive their mains through an IEC socket and they are supplied with moulded mains leads so there is plenty of scope for tweaking if you like that sort of thing.

Talking to the manufacturers (Integrated Engineering Solutions) it turns out that the circuits used in these amplifiers are derived from the valve designs they also make. The wish to keep things simple and a desire for good transient response and recovery has motivated many of the design decisions. As with many hi-fi designers, various choices made during the amplifiers development were based on listening to the results but the typical engineering practice of circuit simulation is also used extensively when deemed appropriate, a potentially effective mix of technology and pragmatism.

Normally with the absence of feedback in an amplifier, you also have an absence of power delivery and damping, and while these amplifiers are never going to win prizes for load tolerance they did not seem greatly fazed by the rather awkward Shahinian Obelisks, at least at sensible volumes. Similarly, my first serious listen in the Phonography demonstration room

▶ saw them working superbly hooked up to a pair of Focal JMLab Cobalt 816 speakers. Treble and bass extension were both slightly curtailed compared to a typical high-feedback solid-state amplifier system but that did not stop these amplifiers entertaining with a wide range of music.

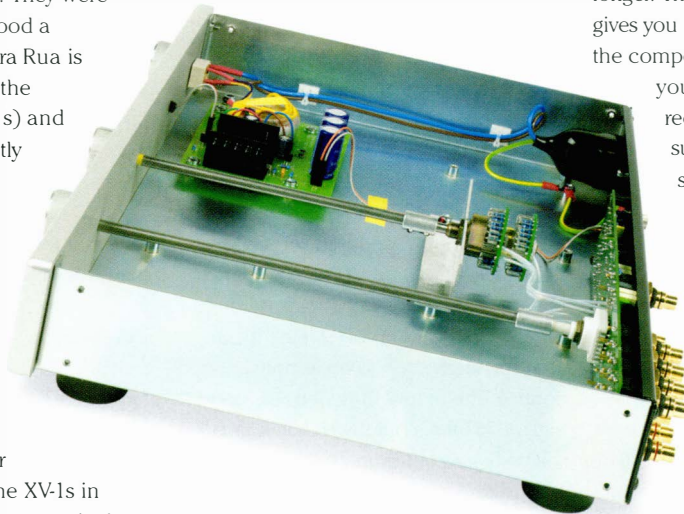
As I already mentioned, clarity and transparency was surprisingly high with an openness and speed that you would normally have to pay far more money for. During my time with these amplifiers I had the pleasure of trying a wide selection of the Dynavector cartridge range. Improving the front end (a Well Tempered Classic with Dynavector 507 arm) by ascending from a 20X, to an XX2 then TeKaitora Rua and finally the XV-1s demonstrated that the Renaissance amplifiers were more than capable of allowing the extra detail and music through. They were happy to show just how good a cartridge the new TeKaitora Rua is (after inheriting some of the technology from the XV-1s) and that the XV-1s is significantly better still. We played a wide range of music during this experiment, but one example that really sticks in the mind was playing the Kings of Convenience (*Riot on an Empty Street*) and hearing the first breathy vocal appear over the acoustic guitar with the XV-1s in the arm. It was one of those magical moments that makes the expense of serious hi-fi seem peanuts and spending thousands on a cartridge that will inevitably wear out becomes almost reasonable. The sense of palpable realism, the sense of a real

person singing, the naturalness was quite stunning and this was all presented without complaint by the Renaissance amplifiers.

As a comparison to this esoteric evaluation of analogue



equipment, my first exposure at Phonography had the amplifiers sandwiched between a Rega Jupiter CD player and the Focal speakers mentioned above, also with very impressive results.



Grabbing a disc I know very well (*Daisies for the Galaxy* by the Eels) and playing 'I like Birds' I was immediately impressed with the ability these amplifiers have to expose the message of the music. In this particular

case a great deal of ironic humour. This track is superficially a terrible test recording, not the widest bandwidth, lots of distorted vocals and instruments. Some systems simply expose all of these negatives laying them bare and at the same time losing the all-important compelling wit, the result is no

longer music as I know it, it is unlistenable. My preferred components seem to manage to knit things into a whole that is musical and has the intended humour intact. This is a clever trick that the Renaissance amplifiers also manage with some aplomb.

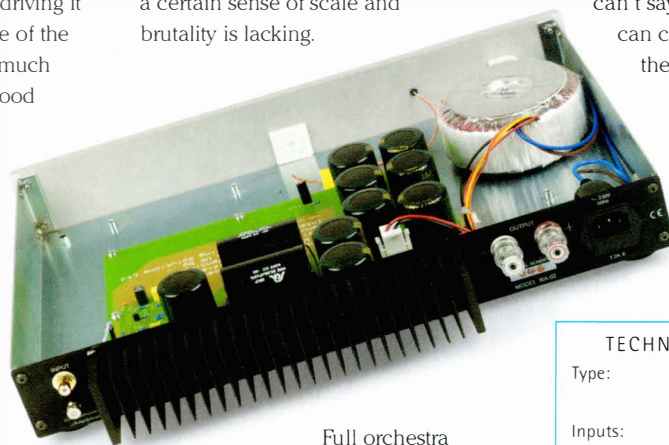
It was clear from these two distinct experiences that the Renaissance amplifiers could form the heart of a wide range of systems and this makes them better value for money simply because they can stay in your system for longer. The basic honesty in their sound gives you the option to tailor the rest of the components as much or as little as you desire and to play horribly recorded stuff through them successfully. Importantly playing something that is well recorded doesn't overwhelm them either. Spin an Opus 3 recording of Eric Bibb or an old Vanguard recording of Joan Baez and the presentation of the space on the recording is very plausible with most of the acoustic clues remaining intact. Imaging is really pretty good, with especially fine separation and stability.

Breaking the combination apart it is clear that the RA-02 pre-amplifier is the stronger product. Wider bandwidth and more transparent, it can expose that bit more of the musical signal ▶

► fed into it. At first glance power amplifiers should be much more difficult a design job than pre-amplifiers. They have to be capable of driving a wide range of reactive speaker loads, supplying sufficient current at relatively high voltage while staying linear and reliable. A line-level pre-amplifier on the other hand simply selects a small (but not too small) input signal and (most of the time) attenuates it before driving it into the high input impedance of the power amplifier, a seemingly much simpler task. But the lack of good pre-amplifiers and the plethora of good power amplifiers implies that pre-amplifiers are a bugger to get right on a limited budget. The RAP-02 power amplifiers are accomplished and are very superior devices at their price point but Renaissance, with their keep it simple approach, have designed a pre-amplifier that is a veritable bargain on purely sonic grounds. If you are looking for a no-frills way to control a couple of sources then the RA-02 should be top of your list.

Before this all sounds too good (casework and features excepted) I do need to state that these amplifiers are not perfect. While being transparent at their price, they still shed detail as you pass through the chain. The sound also lacks a degree of solidity compared to a grippier amplifier. So while the music flows along it can lose focus and foundation especially when you hit dense compositions. But as usual this is all relative and dependant on the capabilities of the rest of the system these amplifiers will be used in. Spinning some large choral works really showed off the crystal clear and open midrange and they have a decent bash at the acoustic space. Vocals, whether the softness of the Kings of Convenience, the gravely tones of a late Johnny Cash or the soaring delights of the Ensemble

Vocal de Lausanne, are handled beautifully with hardly any hardening at the top of an upsurge of sound. Their linearity is also better than many amplifiers at this price. This means that repetitive phrases that exist over a changing background are not affected, I would guess that inter-modulation distortion, both in terms of magnitude and frequency, is very low. However, a certain sense of scale and brutality is lacking.



Full orchestra or a large choir demonstrate diminished scale and attacking rock is slightly blunted. While you could never describe these amplifiers as lacking dynamic ability or speed there is a limit to how well they can control a speaker like the Obelisk when fed with a decent source, a limit to the sheer weight they can deliver. But remember, you can expose any amplifier at this price. Feed them from a lesser source and drive easier, more bandwidth limited speakers and this is all less obvious, partly because the power amplifiers are happier and partly because the information is simply not there to be lost.

I enjoy having products like these Renaissance amplifiers in my system, partly because they are a joy to use; they operate flawlessly from first turn on, with no nasty bangs, thumps or squeals, but their main appeal lies in the way they deliver music to order. It never seems to matter what you play through them, everything is handled well, the amps covering

their tracks and the musical message communicated intact. Most importantly, I am entertained. But what really lets you know a product is working well is when you have no real desire to swap back to your usual components. So it was with the Renaissance amplifiers; they did a good job in a pretty expensive system that should have seen them way out of their depth – and you can't say fairer than that. If you can cope with the lack of features they are must listen. ➤

#### TECHNICAL SPECIFICATIONS

Type:	Solid-state, zero-feedback line-stage
Inputs:	4x line-level (single-ended RCA/phono)
Input Impedance:	50 kOhm
Outputs:	
Output impedance:	75 ohms
Bandwidth:	20Hz to 100kHz +/- 0.1dB.
Dimensions (WxHxD):	450 x 65 x 330mm
Weight:	6Kg
Finishes:	Silver or black.
Price:	£649
<b>Mono Power Amplifier RA-02</b>	
Type:	Solid-state, zero-feedback mono-bloc
Output power:	50W into 8 Ohms
Loudspeaker Terminals:	WBT touchproof
Bandwidth:	20Hz to 20kHz +/- 0.2dB
Dimensions (WxHxD):	450 x 65 x 360mm
Weight:	9Kg ea.
Finish:	Silver or black.
Price:	£1499 pair
Package Price:	£1999 for RAP-02 + 2x RA-02 bought together

#### Manufacturer:

Integrated Engineering Solutions Ltd.  
Tel. (44)(0)2380 905020  
Net. [www.highendaudio.co.uk](http://www.highendaudio.co.uk)

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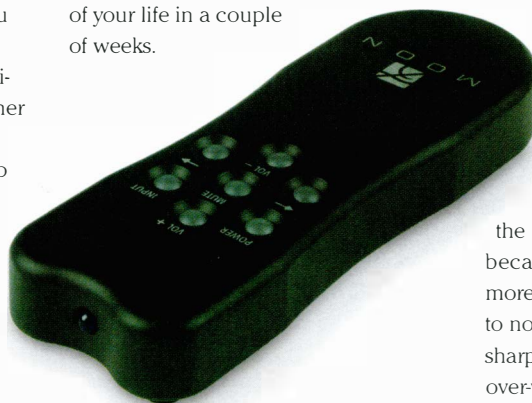
# The Moon i-5 Integrated Amplifier

by Chris Thomas

In an ideal world hi-fi reviewers should look to spend as much time with each product as possible before committing their opinion to print. A sensible and rather obvious enough suggestion you might think. After-lunch listening sessions where four or five psychologically overwrought hi-fi journalists gather round a pair of speakers and the one who drew the short straw gets to swap amplifiers while the others scribble notes, used to be de rigueur in this business. Back in the eighties I sat in on a couple of these truly depressing occasions myself. In fact the whole business of group listening tests fills me with apathy and I always decline the offer to attend these days. My preference is to be left alone with the product and this means no visits or pressure from manufacturers or importers.

But I have been left with the Canadian built Moon i-5 for about eight months now, which could be thought of as stretching the review period to ridiculous lengths. Truth is that it has been difficult to find room to fit it in; such is the wealth of product flowing through Hi-Fi Plus these days. But it has been so long and I have used the Moon in so many different situations and with so much different equipment that I feel I know it inside out by now. So, regard this as a long-term user report as much as a review. In fact, the i-5 was originally reviewed back in Issue 5 by CB who also much admired its fuss-free approach to music making. And what other products can you name that have run essentially unchanged for upwards of five years? That alone is reason enough to revisit these shores. Besides, such extended and varied use without the pressure of having to make quick deadline judgments will give you a broader and more

relaxed perspective on any product and quite often your thoughts about it are very different to those you might have had if it flitted in and out of your life in a couple of weeks.



You may remember my enthusiasm for Moon's i-3 last year. Here was a £1500 integrated amplifier that was genuinely involving and even exciting to listen to. Its shiny-bright balance was backed with very decent overall resolution and a snappy sense of control. It was fast, tight and able to get a grip on speakers that one might have initially thought were outside its scope. It has a paper power output of 100 watts per channel that gave it potent, lively driving power and it coupled this with excellent bandwidth and a surprising degree of subtlety and finesse. The downside was that it was a bit brittle and rather too gushing for several weeks before it calmed down and its performance stabilised, but I always felt that it could be a sadly misunderstood disaster in the wrong system. But, despite that, for me it has become a reference product at its price. Not for its technical superiority but purely for its engaging and fun approach to music. The i-5 costs about £1000 more and has less power (80 instead of 100 watts) and if you were to assume that this is an upmarket i-3 variant you would

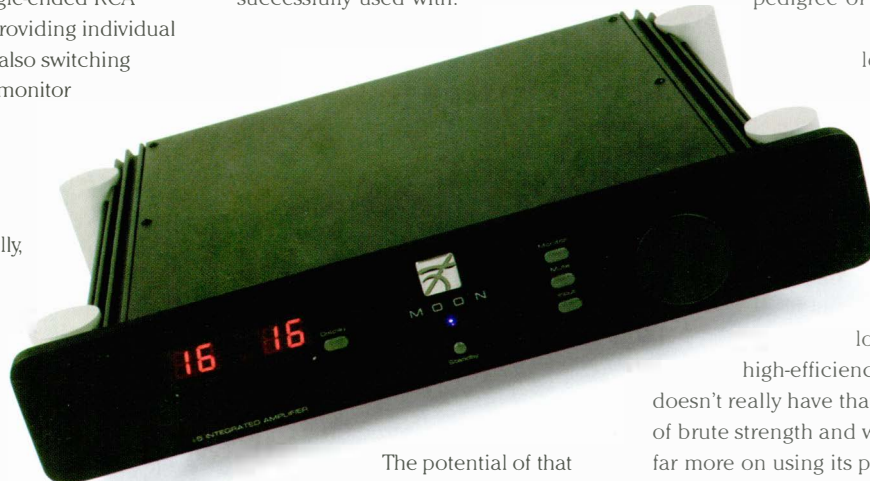
be as wrong as I was when I first plugged it in. I was expecting a lengthy dumbed-down break-in period and I was not disappointed, but where the i-3 was thin and snatched at the music somewhat, this amplifier was just the opposite. It was warm, slow and lacking any genuine sense of that taut note articulation that its little brother excelled in. About six weeks later the i-5 suddenly began to shed the fat, became leaner and developed a much more reasonable and realistic attitude to note control. Leading edges became sharper and more cleanly defined as the over-warm tonality fell away. Like slowly focussing a fine lens this slowly spread throughout the whole bandwidth and since then the amplifier has displayed a commendable degree of musical consistency at the heart of many systems. But, once again, I am reminded that the pitfalls of a demo in a dealers listening room where the amplifier is either fresh out of a box or insufficiently run-in are all too real.

Physically and specification-wise the i-5 bears a broad resemblance to the i-3 although the inclusion of a rotary volume control and the amplifier's body being slung between rather smart outrider legs gives the former a much more purposeful look to my eyes. Each leg is terminated with a screw-in spike which is adjustable to level the amplifier and can even be left off altogether to tune the sound somewhat as the surface it stands on has a surprisingly large effect upon the amplifier's overall tonal balance. I'm not sure the amplifier designers would condone this though, but there is room for a degree of experimentation here. The window on the front panel remains and displays each channels volume setting from ►

▶ zero to fifty and can be switched for continuous use or illumination during the duration of the command only. To keep the front panel as clean and uncluttered as possible Moon have included a button that scrolls through the five pairs of single-ended RCA inputs instead of providing individual switching. There is also switching for both mute and monitor and all of these are mirrored on the chunky aluminium remote control, which, ergonomically, is one of the very best around.

Even after the amplifier has settled, the i-5 is notably different both in its tonal characteristics and the way in which it presents the musical picture. Where the i-3 is up front and exuberant the i-5 always seems to have more time and a much broader tonal palette at its disposal. It is too easy to think that this is a slower amplifier as the cheaper amplifier's brightness gives it that extra sharpness and push but I don't believe that this is necessarily the case. The i-5 is simply far more revealing at controlling the nature and independent musical signature of the initial impact of instrumental and vocal leading edges. It makes the i-3 seem rushed and even little crude and after a short while this extra quality really begins to tell, especially when you ask it some serious questions and give it a loudspeaker to drive which is able to resolve its capabilities.

The JMLab Micro Utopia Be is such a speaker and one that I have been happily using for more than a year now. One of the truly exceptional things about the Micros is the range of amplification they can be successfully used with.



The potential of that Beryllium tweeter seems almost limitless, it never runs up against a performance brick wall like the majority of standard units out there and I have been using it with some of the world's finest amplification costing well over \$20K with stunning results.



To the credit of both the Moon amplifier and the speaker, they make a formidable musical partnership especially when you look at the relatively reasonable costs

involved. The Micros open the door and allow the i-5 a sense of dynamic freedom that includes timing and tonal issues. But, make no mistake; they will punish inferior

amplification, regardless of pedigree or price, severely.

If you are looking for a driving powerhouse of an integrated amplifier the Moon may not be the first place you would look. Even with

high-efficiency speakers it doesn't really have that relentless sense of brute strength and weight. It majors far more on using its power subtly, but across its whole bandwidth. When you live with it for a while and listen to it with broad range of music you really appreciate its balance of talents. In fact the word balanced goes a long way to describing the Moon in a single word. For a start, the amplifier's bandwidth is all useable and it has a commendable sense of grip throughout. From top to

bottom it is focussed and this

helps enormously with its whole sense of timing and tempo. But this isn't the same kind of electronic grip that the i-3 excels at but a rather more organic flow of musical information. By its nature it is slightly laid back and this will be affected absolutely by the source, cabling and speakers. But its

soundstage is broad and deep and it holds this picture of the recording with excellent and consistent stability. There is ample space to allow you to get an ear inside the mix ▶

► and follow each and every instrument and appreciate how it is being played. And if you enjoy that sort of listening the Moon has plenty about it to delight you because its resolution of tonal colour is one of the really notable things about it and very likely its main attraction to those who already own it. From the way the Moon addresses the rise of each instrument's musical signature to the sound of a string section's harmonic shimmer the i-5 lets the music do the talking. There is certain cosy warmth added and perhaps a bit too much creaminess at times but, at this price, you can't have everything. But don't get the idea that the tonal balance is dull or that

but, even with high impact driving music, it can quite often seem a little restricted on pure drive and projection. It is also well worth mentioning here that the way in which the volume control works and the increasing jumps between the increments mean that finding precisely the right volume setting is easy. It is very nearly as good in this respect as the control used on the Mark Levinson preamplifiers. Sit in front of this combination with the volume wound up and the sound is so clean that you often do not realise just how loud you have been listening until you leave the room. And you will find yourself listening at higher levels as a result.

flow and flavour quite as well.

At the start I mentioned that I have been using the Moon i-5 for many months and it has never given the slightest hint that it is anything other than completely stable. I like the fact that it is small and runs cool, even under duress and is very, very quiet. Throughout all of that time, once the warm-up period had been endured, it has been one of the most consistent pieces of hi-fi, in terms of its performance, that I can remember. It gives a genuine taste of what serious audio should be about at a very reasonable price. I can certainly recommend it though I would caution against using it in a system with very inefficient speakers or in a situation where the source and speakers are already tonally balanced on the smooth side. Those minor caveats aside I'd give it my strongest recommendation. ➤



it is soft in any way. It has all the extension you might hope for at both ends and can be very forthright and even explicit when the occasion demands. Refinement and subtlety are the areas, which separate the i-5 from the i-3 and a certain economy of power delivery that means that it never sounds as if it is trying quite as hard. Rhythmically it is excellent though it is perhaps not explicit enough tonally to really draw your attention to its overall coherence. But give it some work to do tempo-wise and it does a very creditable job in maintaining the elements in time and space.

Push the volume up and it sometimes seems as if the system is hardly growing louder at all as the sound just swells and adds more and more flesh

Neither the speakers or the i-5 really feel efficient or musically satisfying until a certain volume level is reached and then the sense of focus just takes over and the whole balance and picture of the music remains resolutely fixed in space where it will remain unerringly stable. And the i-5 has depth too which starts at the plane of the speakers and extends behind and way outside the physical boundaries of the system. You could certainly never describe the sound as being up-front. This is an amplifier that majors on subtlety and the more delicate aspects of the recording and musicianship so if you like to be pinned to the back wall there are plenty of other amplifiers that offer more bang for your money but very few that I have heard that can resolve the delicacy and subtle changes of musical

#### TECHNICAL SPECIFICATIONS

Type:	Solid-state integrated amplifier.
Inputs:	5x line-level (RCA)
Input Sensitivity:	33mV - 3.0V RMS
Rated Output:	80 watts @ 8 ohms 110 watts @ 4 ohms
Dimensions (WxHxD):	430x100x380mm
Finishes:	Black or silver
Weight:	12 Kg
Price:	£2595.00

#### UK Distributor:

Redline (Scotland) Ltd  
Tel. (44)(0)131 555 3922  
Net. [www.red-line.co.uk](http://www.red-line.co.uk)

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Simaudio  
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A close-up photograph of a Sutherland keyboard mechanism. The image shows a white, brushed metal frame with two circular holes on the left side. The keyboard keys are visible through a triangular opening in the frame. The keys are black with red accents. The word "SUTHERLAND" is printed in black, bold, sans-serif capital letters on the white frame. The background is a dark purple gradient.

**SUTHERLAND**

# Sutherland

## The Director Line-stage

by Jimmy Hughes

My first encounter with Sutherland electronics came when I reviewed their outstanding Ph.D. battery powered phono pre-amp. It came as part of a group test, where it was pitted against other phono-stages – some costing quite a bit more. Despite this, and despite some impressive qualities displayed by those other phono-stages, the Sutherland was comfortably my favourite. It had a naturalness all its own: a distinct neutrality that revealed subtleties of timbre and tonal colour with no sense of self-imposed colouration.

The net result was that voices and instruments retained more of their individuality – their unique tonal distinctiveness. Listening to the Ph.D. made one realise that (by comparison) most other audio components imposed a coloration signature on the sound. Now, this might be described as 'rich' or 'warm' or 'bright' or 'lean'; it might even be attractive and very pleasant to listen to. But, it was a quality or characteristic superimposed by the equipment. By comparison, the Sutherland Ph.D. sounded free of such coloration. It was like an open window on the music.

The explanation for this almost certainly stems from Sutherland's use of a battery power supply. Having used battery-powered equipment before (in the '80s I had a DNM preamp) I recognised a special sort of openness and neutrality. With the DNM, it was possible to switch between battery or mains supply. And doing so left no doubts about the advantages of battery power. Not that a battery supply is

perfect; it brings its own problems and limitations. But it does free you from the mains with all its noise and rf problems, and this is a major benefit.

I mention all this because the Ph.D. created definite expectations for Sutherland's Director line-stage. Having a sense of where Sutherland were coming from in terms of sound quality, I already had an idea of what their Line pre-amp might sound like. As things turned out, I wasn't disappointed – it proved to be very much a chip off the old Ph.D. block. But surprisingly The Director is not battery powered like the phono-stage. Apparently, Sutherland thoroughly explored that avenue, but results were not entirely satisfactory. In the end, it was found that a battery supply did not meet the required standard.

So for reasons covered later – among them, the need to have high-power consuming circuitry to retain dynamic attack that would have 'eaten' cells at an alarming rate – the battery option was eventually discarded and replaced with a mains supply. Nevertheless, considerable care was taken over design of the supply in order to make it perform electronically and sonically like a battery. While, from a purely practical viewpoint, this is a good thing – a pre-amp that needed fresh batteries every few days or so would have been a right pain in the arse – the question remains; have Sutherland really been able to come up with a mains power supply that

mimics the sonic results produced by batteries?

The Director is one of the simplest and most 'stripped' minimalist designs ever. There's just one control – for volume level – and that's it. There's not even a mains on/off switch – though further options (mute plus volume increase/decrease) can be accessed via the remote handset. What – I hear you cry – No input selector?



Calm down dear... Cleverly, The Director automatically selects an input as soon as it senses signal voltage at a particular set of sockets. This means there's no need to select CD when you want to play a compact disc; just press Play on your CD machine and The Director will switch over without prompting. However, in order to avoid confusing the pre-amp, you need to have just one source producing sound at a given moment.

Those who favour ultra-fine control of volume levels will find The Director close to ideal. In all, 128 level settings are offered, giving a total range of 78dB. There are 31 steps of 1dB between –27.3dB to –57.3dB, and 96 steps of 0.5dB between –27.3dB and +20.7dB. Whereas most conventional volume controls are fairly sensitive ▶

▶ – producing noticeable changes in level when turned just a notch or two – the control fitted to The Director is broader and needs turning 180 degrees (or more) before having any sort of noticeable effect. Although this provides incredibly fine adjustment, it also means the user is given little ‘feel’ for change.

As a result, you seem to be able to turn the knob quite a way without hearing much (if any) change in subjective volume level. True, there’s a visual display. But, with only 16 leds covering a dynamic range of 78dB, this is coarse and only shows fairly broad changes in level. A volume control linked to a numerical display calibrated in decibels

natural clarity. I used my review sample with Chord’s Mezzo power amp, and immediately noticed a difference in the way subtle timbres were portrayed. The Director produces an increased sense of dynamic separation and tonal individuality.

would have provided a more precise indication of the exact volume setting – useful for those times when it’s important to set volume levels to a specific repeatable value; for example, when A/B comparing equipment.

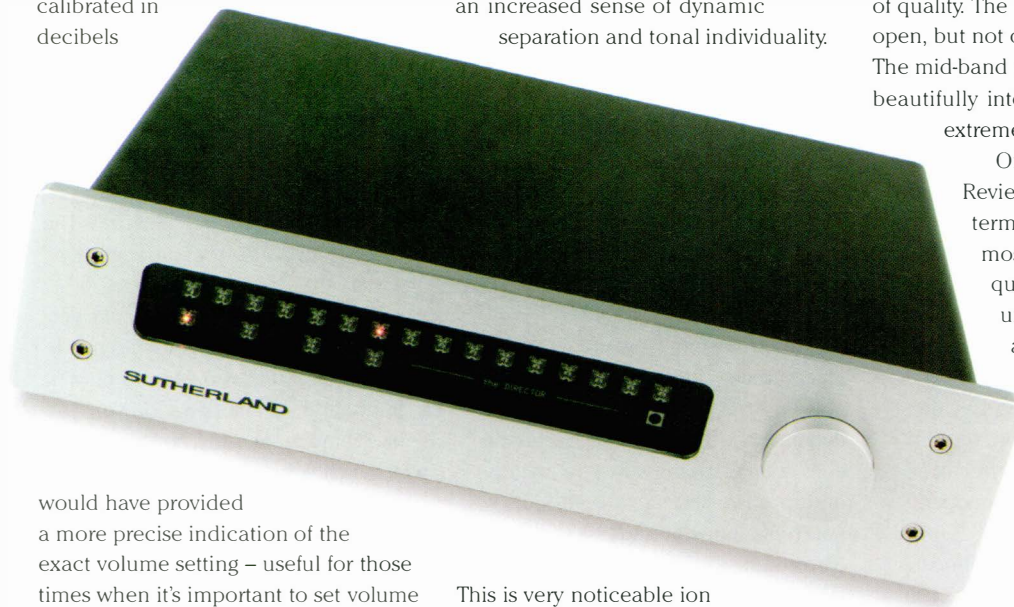
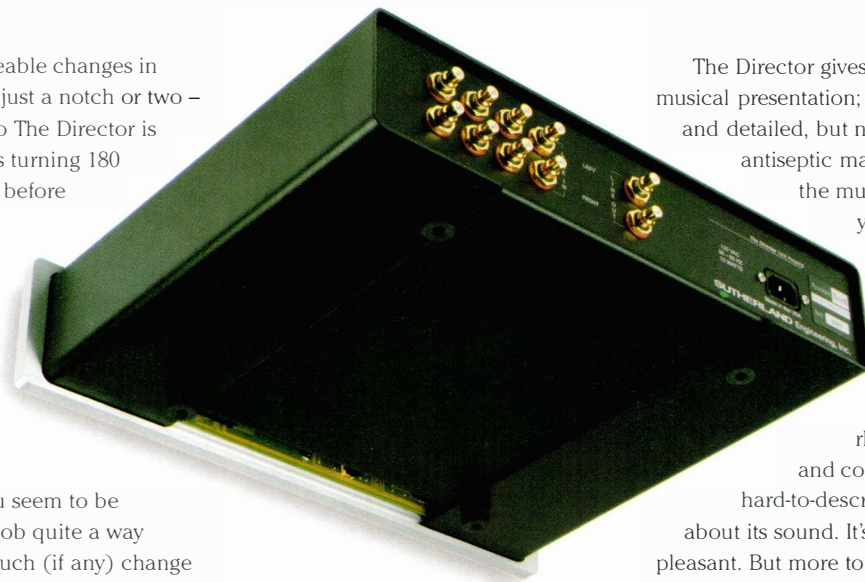
Having hugely enjoyed the results produced by Sutherland’s Ph.D. phono pre-amp, I was hoping and expecting The Director to offer more of the same. I wasn’t disappointed. There’s a similar kind of openness, the same sort of easy

This is very noticeable in simple naturally-miked acoustic recordings – for example, when you get four or five voices singing a Cappella. To a far greater degree is usual, you feel you can hear the distinct timbre of each voice more clearly. Individual tone colours and subtle dynamic inflections come through with greater precision and accuracy.

The Director gives a very clean musical presentation; it sounds lucid and detailed, but not in a clinical antiseptic manner. It presents the music in a relaxed yet focussed fashion, with impressive clarity and crisp attack. There’s convincing rhythmic drive and coherence, plus a hard-to-describe ‘rightness’ about its sound. It’s likeable and pleasant. But more to the point, the total presentation has a truthful and utterly believable quality. There’s no excess or exaggeration. Bass is very powerful and weighty – deep and strongly nuanced, but clean and controlled, with a nice full solid sort of quality. The treble is crisp and very open, but not overly bright or sharp. The mid-band is smooth and liquid; beautifully integrated with the extremes of high and low.

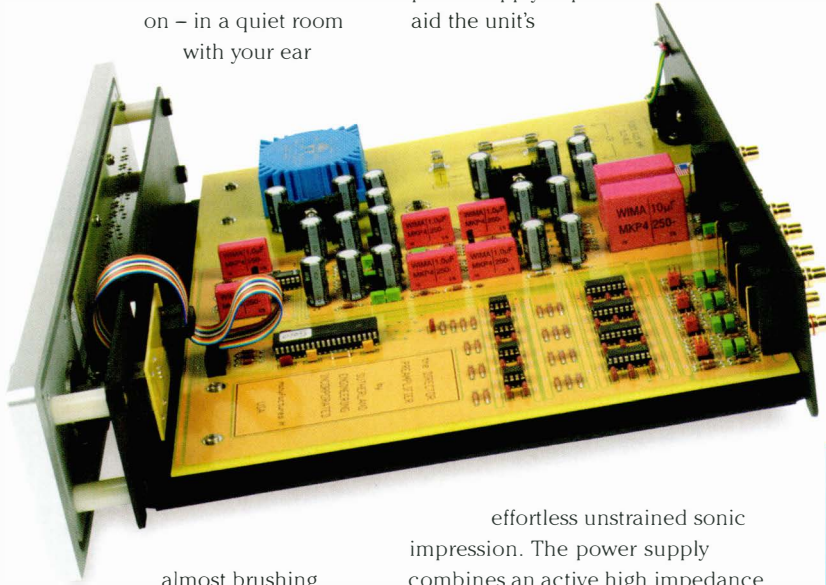
Of course all that’s Reviewer Speak; in musical terms what strikes the ear most is the seamless natural quality of the sound – its unexaggerated rightness and believability. While you might find yourself deeply impressed on first acquaintance, once you’ve lived with it for a while you’ll almost certainly take The Director’s special qualities for granted – as though all line

pre-amps sounded this good! Speaking personally, I found this very much the case with the Ph.D. – it was only when going back to other phono-stages that I realised (again) just how different and special it was. The Director is very similar – it ▶



► does its job so easily and comfortably, you mistakenly think that what it does is easy...

It's a very quiet pre-amp – electrically and mechanically. The innards are very well shielded by a heavy 12 gauge (1/8th in thick!) steel case. Although the lid section rings quite noticeably when tapped, it is not set into resonance by the mains transformer. Even with your ear close to the casework, it's difficult to tell whether or not The Director is switched on – in a quiet room with your ear



almost brushing the top of the unit, you can just (JUST!) detect a faint almost inaudible buzz. Maximum gain is given as 20.7dB, with a maximum output voltage of 8 volts RMS. This should enable even inefficient speakers to be driven hard.

It's a large heavy pre-amp, weighing in at about 24lbs (11kg). Most of the weight is in that thick steel case – a fact borne out when the remarkably and surprisingly heavy lid is removed. The front panel is made from aircraft grade solid aluminium half an inch (13mm) thick. There are four line inputs (each with selectable hi/lo sensitivity) and one set of outputs. All inputs and outputs are unbalanced, incidentally. For what it's worth, distortion levels are vanishingly low; less than 0.01% thd A

weighted (including noise) for an output level of 2.5v at 1kHz.

Interestingly, Sutherland avoided op-amps for the important gain stages. Instead, they used all discrete components including hermetically sealed dual J-fets for the input stage followed by a bi-polar gain and Class A bi-polar output stage. All bias currents are kept high to maintain dynamic reserve, while extensive use of high-capacity low-impedance power supply caps aid the unit's

effortless unstrained sonic impression. The power supply combines an active high impedance current source with passive pi RC filtering followed by a low impedance shunt voltage regulator to create something close to a 'perfect' battery type supply.

The manufacturer claims that great care was taken to ensure that noise from the various displays did not contaminate the audio circuitry or power supplies. Moreover, the auto-switching sensor for input selection is disabled as soon as an input is chosen. The volume control knob has a ball bearing mount to give a smoother more effortless feel, and the control itself turns continuously through 360 degrees – there's no physical start and stop point. Usefully, the pre-amp 'remembers' previous volume settings.

Those who've already experienced

Sutherland's Ph.D. phono-stage will have a good idea of The Director's sonic qualities – it definitely offers more of the same. If you want a line pre-amp that's superbly tactile and dynamic, yet at the same time smooth, well-balanced, and above all, neutral and truthful, Sutherland's The Director is definitely one you have to hear. It transcends all the usual transistor/tube prejudices, producing a wholly natural sound that's clean, unexaggerated, and well balanced, without being boring and nondescript. It should suit a wide range of power amps (both transistor and tube), and produces results that do justice to any type of music. Representing a near perfect balance between hi-fi performance and musical sensibilities, its delicacy and finesse is in stark contrast to its massive, heavy appearance. It might look like a traditional US high-end product, but its performance definitely sets it apart.



#### TECHNICAL SPECIFICATIONS

Type:	Solid-state line-stage
Inputs:	4x line-level (single-ended RCA/phono)
Input Impedance -	
Low Gain:	29kOhms
High Gain:	42kOhms
Gain:	3.8dB (low gain) 20.7dB (high gain)
Outputs:	1x pre-out (single-ended RCA/phono)
Input Impedance:	270Ohms
Dimensions (WxHxD):	430 x 108 x 380mm
Weight:	11kg
Price:	\$3000 (+shipping, duty and VAT if imported into the UK)

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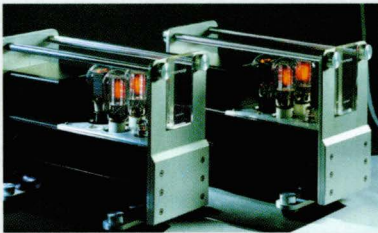
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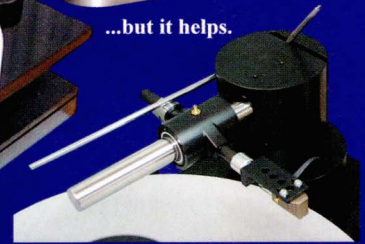
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# The Digital Audio Systems Hailey Active Loudspeaker

by Roy Gregory

Bill Dyer, designer of the Digital Audio Systems Hailey loudspeaker is something of a conundrum; a dyed in the wool member of the professional recording industry who exhibits distinctly domestic hi-fi sensibilities. It's a juxtaposition which is embodied in the speaker itself, outwardly the very model of a studio monitor, but inwardly a rather different proposition. The Haileys are both less and more than they seem.

Viewed from the front we are presented with a fairly standard two-way compact monitor, teaming a 170mm long-throw bass unit with a 25mm soft-dome tweeter. The silver styling lines that surround the high-frequency unit, together with the twin reflex ports give a distinctly retro hint. Combine it with the grey paint finish and the smoothly beveled edges and every time I look at the Haileys I wind up thinking "Dan Dare". But hey, Dan's the man, so that's no bad thing.

Look round the back and the surprises begin. The rear panel is a flat sheet of black aluminium, which, together with the paucity of connections and the on/off switch, rather gives the game away. The Hailey (sadly named for the Hertfordshire village rather than the iconic 50's rocker) is an active loudspeaker system, incorporating its own active crossover and two channels of amplification. Now, the idea that passive crossovers are the root of all evil is hardly news. Nor is the popularity of active speakers for monitoring purposes, with popular models from the likes of ATC, PMC and Genelec all enjoying attention from the hi-fi press and buying public alike. However, the Hailey is a cat of a rather different colour, and whilst

the elimination of the passive crossover might be its *raison d'être*, the actual implementation of the design departs on its own, very distinct trajectory.

Active crossovers offer a number of advantages. Direct coupling the amplifier to the drive-unit is no bad thing, but the real benefit of an active filter is that it offers the designer both additive and subtractive options. Whereas a conventional, passive crossover can only remove parts of the signal, thus shaping the overlap between drivers, the active option is far more versatile. A driver's output can be shaped or compensated to achieve a flat frequency response. A peak here or a trough there, simply cut or boost the input signal by the appropriate amount. Likewise its natural roll-off can be counteracted by the application of an inverse rise in signal level. It's a technique that's becoming more and more familiar from its use in sub-woofers, where the ability to manipulate extension and frequency response are also familiar options. Applied to the typical small, active studio monitor, the technique is generally used to achieve a flat frequency response of exceptional bandwidth from a compact enclosure, the bass in particular being heavily equalized.

In stark contrast, the Hailey adopts a far more purist approach. To appreciate the reasoning behind it it's necessary to first understand the mindset that created it. Bill Dyer has a long and highly respected history in the recording industry as the importer of EELA mixing desks. It's seen him working in and around some of the biggest names and most famous locations in the recording

industry. It's also left him with a fairly jaundiced view of most monitoring systems as well as the way in which they're used. As he points out, most recordings are far from stereophonic. In fact, technically they are biphonic, constructed from a series of mono feeds patched together to create a stereo spread. The problem is that most monitors are insufficiently revealing to show the shortcomings inherent in this approach. That means they're also insufficiently revealing to allow the engineer to create the best from a bad job.

The other major shortcoming he hears in most studios is a lack of harmonic development and accuracy. The combination of a ruler flat but heavily manipulated frequency response with a thirst for ever more information and separation has tended to pinch and curtail the harmonic structure of notes. In order to capture a true stereo picture as well as one that has accurate harmonic colour and structure, a speaker needs superior phase and transient response. It's these reasons and with this goal in mind that Mr Dyer opted for an active crossover. The drive units are thus direct coupled without the phase issues involved in large coils, yet the lack of additional, active equalization means that the dynamic integrity of the system is unimpaired. Indeed, the -3dB point at 55Hz is modest indeed for the size of the cabinet. The slopes are also carefully chosen, an unusual combination that preserves the phase and spatial integrity of the signal, arrived at after exhaustive experimentation. In the same way that no active equalization has been

► used, the speaker has been voiced by ear. That it measures pretty well is more a result of fundamentally sound design rather than the slavish application of measured response.

This audio fundamentalism extends to the rest of the speaker too. The cabinet is constructed from 18mm MDF, heavily damped with 4mm bituminous pads to create a rigid and well-behaved structure. Amplification and crossover elements are imported from Holland, fruits of the old pro contacts. The inputs are limited to a single, balanced XLR, with a 1/4" jack option through the centre. There's also an earth post, on/off switch and a rotary volume control. The tweeter is ferro fluid cooled and offset in the heavily chamfered baffle, in order to minimize diffraction effects. There are no grilles supplied. The interior of the cabinet is critically damped with a small amount of 4cm foam to help reduce internal reflections. Whilst the balanced input might be assumed to be a pro legacy, in fact like everything else in the speaker it was chosen for performance reasons based on the good common mode rejection of balanced cabling. This is augmented by the use of an RFI filter on the crossover input, which is bypassed in single-ended mode. DAS will supply single-ended adapters if required.

Overall fit and finish is neat and business like, although competing products from large, mainstream manufacturers will always have the edge in this regard. However, that's unlikely to feature largely in the success (or otherwise) of the Hailey. Those who buy the speaker will do so because they buy Bill Dyer's arguments about accuracy of musical reproduction. Listening to the Hailey, I'd have to say that the case, when compared to run of the mill speaker designs, is pretty compelling.

I used the Hailey in two different ways: fed directly from the balanced outputs and digital volume control of the Wadia 861SE to create a high-quality three-box system; and from the single-ended outputs of the

transparency and substance, but there was also a slightly muscle-bound, almost mechanical feeling to proceedings.

Inserting the line-stage and single-ended



Vibe, via XLR adapters running the speakers in single-ended configuration. Ultimately it was the latter that I preferred, and not just because of the ability to play records rather than just CDs. Driven by the Wadia there was no arguing with the

connection created a much more fluid, supple presentation, although whether this is down to the control unit or the interface I can't say. Either way, those interested in the Haileys should examine the question of the driving system with some care - and don't simply assume that balanced will be better?

The first thing you're going to notice about these speakers is their impressive imaging. Not only do they effectively disappear, but in their place they leave a soundstage of unusual coherence and natural perspective. Of course, the designer dispensing with active equalization means that the speaker lacks some of the adjustability and adaptability that characterizes other powered designs such as those from PMC, reviewed in Issue 30. However, if the outstandingly natural stereo perspectives are a result of this straight-line philosophy then it's a more than ►



► worthwhile trade-off. Likewise, the convincing stereo might not interest you in itself, but it in turn indicates an evenhandedness and lack of exaggeration or deviation across the frequency spectrum. Bill Dyer might not have set out to create a speaker that measures flat, but that's exactly what he's produced. This lack of emphasis is surprisingly refreshing, especially if you return to other, less cultured transducers, where the own particular signature suddenly stands between you and the performance. Like any good monitor, the Hailey stands aside, allowing the music to speak for itself.



But don't go getting the idea that this is the perfect speaker. Compared to the admittedly more expensive combination of the Living Voice OBX-R2s and the Linear A, the Haileys lack both tonal range and the subtler aspects of musical expression. The vocal details that bring Janis Ian to life on the album *Between The Lines* are

skated over, the diction and finesse slightly lacking. Likewise, the character and contrast in the backing vocals is collapsed. If I had to point a finger I'd (somewhat reluctantly) single out the drive units, in particular the tweeter, as the culprits. They simply don't seem to have the resolution of low-level information that recent advances in driver technology allow, despite banishing the passive cross-over. As a result there's a slight clumsiness and lack of articulation to proceedings compared to the very best.

On the upside, they offer a lively sense of immediacy and superb lateral separation that really injects energy into a performance without sacrificing control or stability. Massed choral voices are held in space, with no tendency to congeal or jostle to the front of the stage, while the natural perspectives and convincing soundstaging made acoustic recordings a joy. It didn't matter whether I reached for the Vivaldi *Gloria* or Archie Shepp, I was assured of an intimate, engaging and musically direct experience.

As with all active speakers, value is a difficult thing to assess. But rather than pointing out that these two boxes actually constitute half a system, I'd rather consider their musical performance. Compact, with an agile and tactile bass that's surprisingly satisfying given the stated numbers (maybe these are more accurate than some more imaginative speaker specs) I'd approach the Haileys purely and simply on the basis of their sound. As I've said, you

can undoubtedly get speakers that are more refined and certainly more detailed. But with Bill Dyer's design what you're investing in is their musical honesty. Their faults are subtractive and evenly distributed, meaning that they'll pass a signal without leaving their own grubby fingerprints all over the resulting performance, and without bending it out of shape. All you really need to consider is whether that is what you want?

The DAS Hailey lives up to what the hi-fi community expect from a monitor. It'll also undoubtedly do an excellent job in the more prosaic environment of a pro studio. Its strengths are unusual and lean in the direction of musical coherence and substance at the expense of resolution and sheer transparency. Dyed in the wool audiophiles might find that hard to come to terms with. I suspect that those who simply want to enjoy the music on their discs will have no such concerns. ►+

#### TECHNICAL SPECIFICATIONS

Type:	2-way active loudspeaker
Drivers:	25mm ferro-fluid cooled fabric-dome 170mm doped paper cone bass-mid
Inputs:	1x balanced XLR 1x 1/4" jack
Controls:	Rotary volume on rear panel
Amplification:	2x 100 Watt
Bandwidth:	55Hz - 24kHz ±3dB
Dimensions (WxHxD):	350 x 230 x 290mm
Finishes:	Black or Silver
Prices:	£4000 pr.

#### Manufacturer:

Digital Audio Systems  
Tel. (44)(0)1992 468674  
E-mail. dyeraudio@onetel.com



# The Audio Physic Tempo Loudspeaker

by Paul Messenger

Over the best part of twenty years of loudspeaker reviewing, covering something close to a thousand models, it seems slightly incredible that I've only previously encountered two models from Audio Physic, both back in the mid-90s. This is one of Germany's most respected speaker specialists, and has been doing the business around the world for the past twenty years, so how have its products evaded my clutches for so long?

The reason is probably that UK distributor Aanvil Audio simply chooses not to tout for reviews, which I actually find rather refreshing. Bill is presumably happy with the dealers with whom he does business, and they're presumably happy that they have a product that can be sold on demonstration, with no need to thrust review reprints under the noses of prospective purchasers. There's a sort of quiet confidence associated with Audio Physic that was equally evident when I visited its room at the recent High End Show in Munich, met main man Manfred Diesterich, and was shown the latest developments.

The product range is extensive, encompassing some 19 models in the current brochure, and while there's a nod towards multi-channel home cinema oriented designs, two-thirds are stereo pairs. They're also relatively upmarket: this latest version of the Tempo costs £2,199 per pair, yet there are five larger and more costly models further up the range.

The Tempo is therefore well below the state of the Audio Physic art – it's a bit on the small side to challenge for

top honours, to be frank. But compactness is its own reward, and within the modest dimensions there are a number of unusual and intelligent ideas, the most obvious being a backwards tilt of seven degrees that serves to time-align the mid and treble drive units.

The Tempo name goes all the way back to 1986, soon after the company was founded, though there have been several substantial changes along the way. The original Tempo reviewed in 1995, for example, was a two-way design, with a curiously constructed enclosure that used an oversized, overlapping

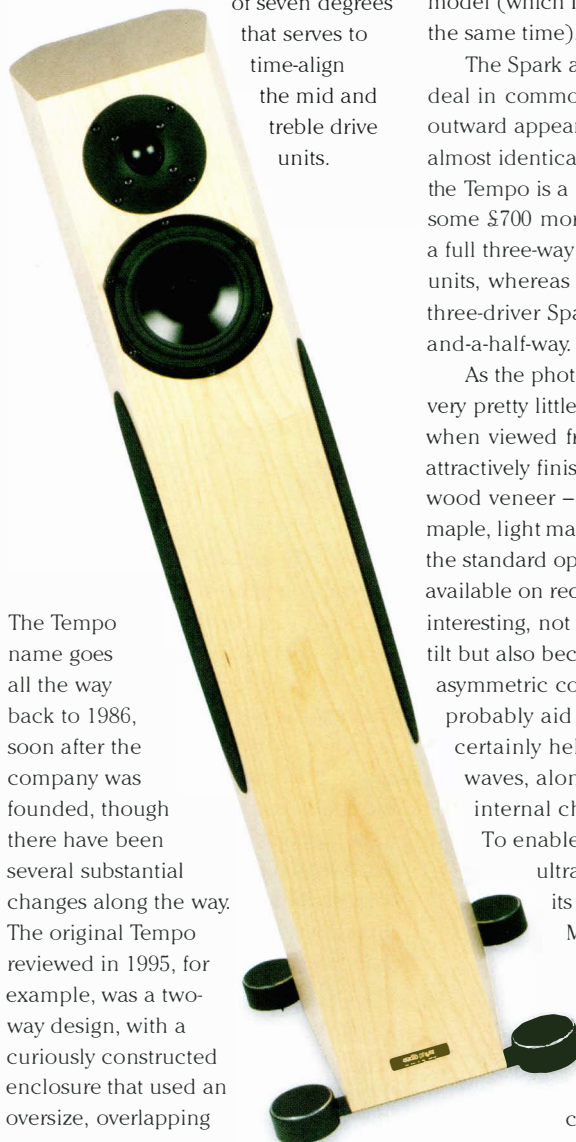
front panel. It also had the backwards tilt, an unusual but characteristic feature that continues through to this latest version, and which is also found on Audio Physic's slightly smaller Spark model (which I also tried out at around the same time).

The Spark and Tempo have a great deal in common, certainly from the outward appearance of what look like almost identical enclosures. However, the Tempo is a little larger, heavier and some £700 more expensive. It's also a full three-way design with four drive units, whereas the smaller, simpler three-driver Spark operates as a two-and-a-half-way.

As the photography shows, it's a very pretty little speaker, notably slim when viewed from the front and attractively finished all round in real wood veneer – cherry, American maple, light maple or black ash are the standard options, with alternatives available on request. The shape is interesting, not only for its backward tilt but also because both sides have asymmetric convex curves, which will probably aid stiffness and should certainly help de-focus standing waves, along with its plentiful internal chambers and braces.

To enable the front to be kept ultra slim, the Tempo places its bass units on the sides.

More than that, the twin 180mm units are mounted magnet-to-magnet, operating in the sort of 'push-push' mode that cancels reaction



► forces and helps avoid cabinet resonances. Mounted on the front, the 150mm midrange driver has a 110mm cone and a protruding pole-piece extension, while the tweeter uses a 25mm soft fabric dome.

One potential problem with slim loudspeakers is that they can easily be accidentally knocked over if steps aren't taken to enhance lateral stability. The Tempo is equipped with metal stabilising rods which significantly increase the lateral spike footprint and also provide secure sockets for mounting the chunky 8mm spikes, the hardware disguised under little cylindrical ends.

The rear panel houses the bass reflex port, and a newly developed aluminium terminal panel. Equipped with just a single pair of high quality WBT terminals, this panel is bitumen damped and fitted with a neoprene suspension, to avoid the sonically adverse effect of uncontrolled vibrations.

Audio Physic has long favoured siting speakers well clear of walls, and this is amply confirmed by the room based measurements, which show a full and relatively even output through the bass and lower mid-band (sub-200Hz). Above that point the response is exceptionally smooth and flat right across the band, though sensitivity through the mid-band using our far-field, in-room technique is a couple of dB lower than the specified 89dB. That modest sensitivity is further compromised by a load that hovers around 4 Ohms across most of the band, though that in turn should be taken in context with the solid, strong

and even output through the bass region below 200Hz. This does average 88-89dB, and thanks to low port tuning of 33Hz shows good extension to around 24Hz (-6dB) in-room.



That flat, smooth mid-band is something that the Tempo shares with its smaller Spark sibling, though it's interesting to note that the character of the two speakers is actually very different, despite the similarity of the drivers used. Whereas the Spark leads with its broad mid-band, lacking a little relative output at the frequency extremes, the Tempo is much more laid back above 200Hz, and relatively significantly stronger in the top and bottom decades.

Sound quality is truly impressive, partly because of the delightfully smooth and even tonal balance, but also because of this speaker's superb imaging and a very impressive lack of

boxiness. Indeed, although those seated on the central stereo axis naturally get the most precise image, few if any speakers in my experience create a more convincing stereo image at the seats located away from the central stereo axis.

In the ultimate analysis, the Tempo is a relatively small loudspeaker, and that translates into a mild lack of weight and scale, and also somewhat limited dynamic punch and grip when compared to larger and more costly designs. That in turn softens contrasts a little and slightly weakens the power to resolve the fine detail in a complex mix.

An album like Arcade Fire's *Funeral* is notably rich in texture, with very dense instrumentation and voices, and while it sounded very open and thoroughly enjoyable through the Tempos, there wasn't the degree of analysis here that's available from a full size monitor. Likewise it wasn't easy to get to grips with an album as maniacally intense and complex as System

of a Down's *Mezmerize*, but few speaker systems can.

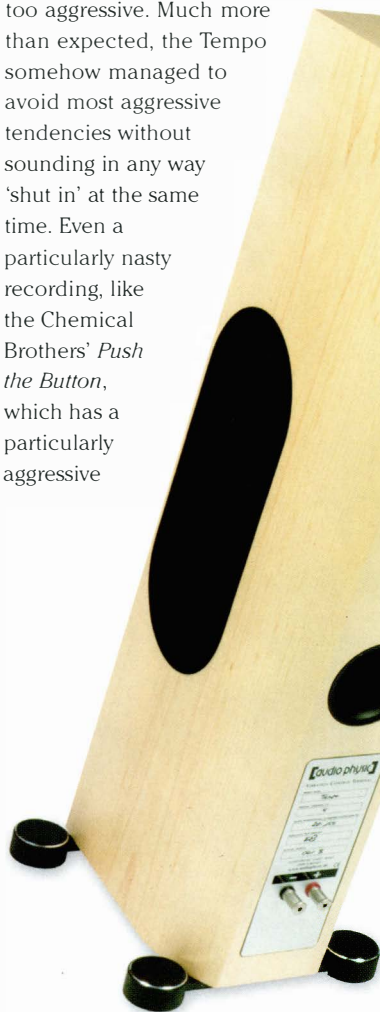
And that's only to be expected. After

all, this is one of the junior models in the Audio Physic portfolio, and in that context it does an awful lot of things very well indeed. Even though loudspeakers as a breed have been improving steadily over the years, few can match the Tempo's smooth and open neutrality and notable freedom from 'nasties', which makes this a particularly easy speaker to live with over the long haul.

The combination of solid and warm low frequencies with a very open presence zone and bright



▶ top end is somewhat unusual, yet also very persuasive. Most speakers show rather more restraint through the presence and treble than the Tempo, and this seems to help one play the system loud without the sound getting too aggressive. Much more than expected, the Tempo somehow managed to avoid most aggressive tendencies without sounding in any way 'shut in' at the same time. Even a particularly nasty recording, like the Chemical Brothers' *Push the Button*, which has a particularly aggressive



top end (possibly due to its copy protection coding) could be played at a reasonable level without too much distress. The Tempo might be a little brighter than average, but it seems to combine this with an inherent sweetness that helps keep sibilants and consonants well in check, while vowels remain open.

Orchestral music too manages to sound rich and sumptuous, while at the same time possessing the sort of

incisiveness that helps highlight the skill and vigour of a solo violin. One afternoon Radio 3 was broadcasting Coleridge-Taylor's *violin concerto*, featuring the BBC Scottish Symphony Orchestra with violinist Anthony

Marwood. It's not a piece with which I'm familiar, but I soon found myself sucked into the work and captivated by the delightful balance that the engineers were achieving between soloist and orchestra, and the clarity with which the speakers were handling a fine performance.

As much as its elegantly slim and laid-back appearance, the elegantly evenhanded overall sound balance is what really singles this speaker out from the crowd. It seems to play any kind of material, from heavy rock to solo folk performances via speech and chamber music, with equal aplomb and without ever letting its own character impose itself on the sound. Indeed, attempting to define its own character is the hardest part of trying to review this speaker, just because 'character' in this case is just so downright elusive.

A slight thickening in the lower mid-band is occasionally audible, on male speech for example, and there is some lack of dynamic grip and punch, which means the sound can be a little too soft and gentle and lacking some bite and drama. One might, in short, wish for a little more incisiveness and a wider dynamic range, especially through the bass region. The Tempo does a superb job of portraying the total impression of a piece of music, without providing quite the level of analysis that reveals the fine detail of

how a mix was put together.

It also supplies brilliant stereo imaging – just about the best I've heard in its ability to create convincing out-of-the-boxes images across a wide seating area – with superior positioning and finely layered depth perspectives on appropriately recorded material. Focus might have been tighter, but that factor actually seemed to help in creating an impression of spaciousness on more artificial pan-pot studio recordings.

Though by no means the last word in dynamic tautness and grip, the Tempo does an awful lot of things very well, especially in its beautifully balanced neutrality, fine bandwidth, freedom from boxiness and superior imaging. These are backed up by a fine lab performance, albeit with modest sensitivity, in what is also a very elegant lounge-friendly package. ▶+

#### TECHNICAL SPECIFICATIONS

Type:	3-way, reflex loaded loudspeaker
Drivers:	1x25mm tweeter 1x150mm midrange 2x170mm bass
Bandwidth:	35 Hz - 33 kHz (-3dB)
Impedance:	4 Ohms
Sensitivity:	89 dB / 1 W (1m)
Power Rating:	20 - 150 Watts
Dimensions (WxHxD):	18.7x100x32 cms
Weight:	20 kg
Finishes -	
Standard:	Cherry, dark maple, light maple, black ash
Optional:	Ebony, rosenut
Price:	£2199

#### UK Distributor:

Aanvil Audio  
Tel: (44)(0)1359 240687  
Net. [www.aanvilaudio.u-net.com](http://www.aanvilaudio.u-net.com)

#### Manufacturer:

Audio Physic GmbH  
Net. [www.audiophysic.de](http://www.audiophysic.de)



# The Coincident Super Eclipse III Loudspeaker

by Jason Kennedy

Coincident Speaker Technology is a Canadian company based in Ontario and run by a gentleman who basks in the name Israel Blume. Israel is one of those guys that you come across from time to time in this industry who could not find the perfect loudspeaker to meet his, clearly discerning, needs. So, undaunted by the fact that some of the greatest minds in hi-fi had been unable to produce the perfect loudspeaker, he decided to have a go himself. As the Coincident website puts it "Blume put his over twenty five years of audio and music experience to work to conceptualize a loudspeaker that would reproduce music with no obvious or distracting perversions." Now where's the fun in that! After all isn't this whole audiophile thing a perversion; shouldn't we just be listening to the music rather than the kit?

But I digress; Israel wanted to combine the best attributes of cones and electrostatics and produced his first speaker in 1993. The Concentric monitor as it was dubbed had a cabinet built out of MDF rings so as to create high stiffness and to reduce internal standing waves. This speaker, however, was apparently aesthetically challenged and expensive to make not to mention insufficiently sensitive for SET amplifiers. But Israel got hooked on the standing wave thing and went to great lengths to come up with a more practical cabinet design that minimised this particular evil, a process that resulted in him patenting an

asymmetrically walled enclosure design that is claimed to eliminate the sonically deleterious effects of standing waves.

He also set about creating cabinets that were inherently resistant to resonance by using tuning rather than damping techniques. This has been approached by employing inch thick 'MDF hardwood' with a spline joint construction technique and a CAD bracing system. Coincident doesn't use damping in its cabinets but raises their resonant frequency to 350Hz, which Israel claims is nearly four times that of most other cabinets (which he puts at 80Hz). Cutting through the creative use of language you can take it that the cabinets are stiff and

heavy, while the lack of internal damping should keep the sound nice and lively.

These are not exactly novel claims, although closer examination of the Super Eclipses (including picking them up) suggests that Coincident have more right to make them than most. But what really hits you when looking at the specs for Coincident speakers is the uncommonly high nature of the impedances they present to your amplifier. The Super Eclipse III has a nominal impedance of 14ohms which when combined with its 92dB sensitivity

makes it, on paper at least, one of the easiest loads in the speaker world.

And this is not even the most sensitive speaker in the range, an honour that goes to the marvellously named Total Victory, a model which combines a 10ohm impedance with 97dB sensitivity and that can be driven by what Israel rather aptly describes as 'flea sized amplifiers'. Not that these things are ever all that small!

These high impedances are achieved by wiring the drive units in series, an approach that necessitates using the crossover to eliminate potential phase problems at low frequencies. Coincident even goes so far as to say its network irons out the dips and bumps in the impedance modulus. The sensitivity is achieved through judicious driver selection and relatively large cabinet volumes.

The Coincident portfolio consists of two ranges, the Eclipse series of which this is the middle floorstander of three (there is also an L/C/R surround bookshelf model) and the UHS series (ultra high sensitivity) where you will find the nine driver Total Victory II and the remarkably compact Triumph Signature. At present the latter range is not available in the UK probably because distributor Simon Mantle doesn't fancy having to shift the TVII's 200lb bulk.

The Super Eclipse III is a pretty substantial speaker itself, weighing in at 96lbs (43.6kg) and standing 42inches (1.06m) tall it features a mere five



► drive units. The impedance never drops below 10ohms making it one of the most triode friendly speakers to come my way – although typically there was no triode amp on hand to take advantage of the fact at the time!

Starting at the top, the driver array consists of a Scanspeak Revelator tweeter, which is the same driver that sits on my reference Living Voice OBX-Rs, though listening to it in this speaker you'd not necessarily guess as much. This is a one-inch silk dome with a double magnet assembly built into a substantial aluminium front plate.



It was chosen for its impressive combination of high sensitivity and high power-handling and is

claimed to have a remarkably flat and even response up to 30 degrees off axis.

The midrange drivers that sit either side of the Revelator are 5inch SEAS Excel units with carbon fibre cones and substantial magnet structures supported by a cast chassis. These are arranged in a classic D'Appolito style, or at least that's what appears to be the case. Apparently in this instance it is a refinement of the standard woofer-tweeter-woofer arrangement. Israel investigated the D'Appolito arrangement and found it wanting in terms of polar

response, his investigations resulting in a number of conclusions that can be seen on the Coincident web site. In essence he discovered that in order to achieve an even polar response with this driver orientation considerable attention has to be paid to driver size, driver spacing, front baffle area and crossover frequency/slope, the precise details of which are part of a patent application that is currently pending.

The bass is taken care of by two side firing drive units whose provenance is not indicated beyond the fact that they are "the finest 8" woofers money can buy". They sport chunky two-inch voice coils and "a huge magnet assembly" to drive the 'specially treated' paper cone. They are mirror imaged in the two cabinets so you can have them facing in or out depending on the nature of your room and the proximity of boundaries.

As my listening room is not exactly cavernous I pointed them in and this worked a treat.

The beautifully finished cabinet features a sealed enclosure for the mid and high frequency drivers that has the advantage of mechanically rolling off the midrange units, while the bass section is reflex loaded. The crossover is a first-order design that is hardwired and connected to the drivers with 6N OFC cable.

The claimed result of this particular recipe is a response that extends from 28Hz to 35kHz (presumably -6dB) and an ease of drive that makes the Super Eclipse usable with a seven-watt amplifier.

I didn't have such a thing to hand but the Sugden A21SE was still in the area and proved to be a remarkably good match, its smoothness balancing out the slightly enthusiastic balance of a less than fully run in speaker. With all this sensitivity this is inevitably a dynamic sounding loudspeaker, it can produce energy without even trying and

as a result instruments and voices have all the power and range that they need to express themselves. Esbjorn Svensson's piano has body and great tone, the kettle drums on Tom Waits' *Shore Leave* are stunning while his voice has a tremendous precision of image, sitting there raw and dirty, full of hope and despair.

This is also a high-resolution loudspeaker. Coincident have succeeded in getting some of the transparency of an electro-static out of this multi-driven design.



It's by no means as smooth as a 'static but then again not much is, but it

does go some way to revealing as much detail and does a great job of delivering solid, three dimensional images. The fact that Adem is doubling up his own vocal on the opening track to *Homesongs* is abundantly clear, and that voice has an uncanny, visceral realism and presence in the room. Of the two reference speakers I use, the OBX-R and the ATC SCM150A, the Super Eclipse is closer to the latter thanks to its tremendous dynamic capabilities and power handling. This despite the fact that it ►

► shares both a tweeter and a philosophy of friendliness to triode amps with the Living Voice.

The balance is quite up front and, while it did smooth somewhat over the course of the review, by the standards around this price point this is not the most sophisticated sounding speaker. I had a Gamut L5 in around the same time which has the ring radiator version of the Revelator tweeter. It produced greater finesse and precision albeit at the expense of a shortfall in dynamics and sheer entertainment ability.

If there's space in a recording, then you know all about it. Just as you know about the scale of the studio thanks to an ability to reproduce an image with real depth and that extends beyond the edges of the speakers. Eric Dolphy's sublime *Hat and Beard* is a case in point, and Patti Smith likewise delivered a stunning physical image from her *Horses* album, the gritty raw edge that she specialises in coming through in no uncertain terms. The quality of playing is also clear, thanks to tight timing on the speaker's part. It seems to revel in less smooth records for some reason; possibly it's the nature of the detail it prefers, the slightly dry upper-mid sounds that indicate a less than silky production but more often than not a great performance. Zappa's *Fifty Fifty* is bounding with raucous energy, his grungy guitar coming through in all its glory. Here the timing wasn't quite as hot as I'd hoped but this may have been an amp thing, the last time I played this was through the remarkably nimble Euphonic Research amps which would have been great with the Super Eclipses – if possibly too much of a good thing.

Where they do relate to the OBX-Rs

is in tonal rendering, bass instruments in particular have a richness and depth that is entirely convincing. The resolution in this department matches that higher up the range and proved quite transparent to the felt nature of the drum sticks used on Don Rendell and Ian Carr's fabulous 'Black Marigolds' (the highlight of the *Impressed with Gilles Peterson* LP). The dynamic range of the speakers allowed this track to build from its quiet beginning to a torrent of sound without any sense of strain, which was very nice.

With Steely Dan you can hear the preference for the upper-mid a bit more clearly, the cymbals, vibes and piano on 'Gold Teeth' are that little bit more obvious than usual and the *Katy Lied* album sounds just that little bit less polished. But the bass is gorgeous, tight and deep and seemingly uncompromised by the positioning of the drive units. David Thomas and his Two Pale Boys turned in the performance of the review for my money thanks to the way these speakers do live recordings.

Their ability to reproduce scale, energy and presence at a sensible volume level comes into its own with a good live event. It must be something to do with the balance because the *Meadville* album has never sounded this good or this real before. Whatever it is it works and it does so at the proper SPL when driven by a 30watt amp. It don't get a lot better than that.

It's just possible that with another 100 hours on the clock the balance of the Super Eclipse might sweeten up but

even if they don't change at all they are some of the most gripping and entertaining speakers that triodes can play with and living rooms can live with. Not necessarily the flattest speaker out there, they are beautifully integrated. They can produce prodigious energy levels and have truly gorgeous bass too, which is very rare for what is not a huge speaker by enthusiast standards. Unlike many speakers coming from across the Atlantic they are neither hard to drive nor tubby down below. Instead, they actually offer an unusual and entertaining alternative to the majority of UK offerings making them a welcome addition to the audio landscape. Their sheer enthusiasm is infectious and if you want to rediscover the joy of music they make it very easy indeed. ➤



#### TECHNICAL SPECIFICATIONS

Type:	Three-way reflex loaded loudspeaker
Driver Complement -	
Tweeter:	25mm silk dome
Midrange:	2 x 125mm carbon fibre midrange units.
Bass:	2x 200mm treated paper woofers
Frequency Response:	28hz - 35khz (±6dB)
Impedance nominal/minimum:	14/10 Ohms
Sensitivity:	92 db @ 1m -1 watt
Power Requirements:	7 watts - 300 watts
Dimensions (WxHxD):	203 x 1060 x 406mm
Weight:	43.6kg each
Finishes:	Natural cherry or red cherry to special order
Price:	£4,750

#### UK Distributor:

Musicology  
Tel. (44)(0)1273 700759  
Net. [www.musicology.co.uk](http://www.musicology.co.uk)

#### Manufacturer:

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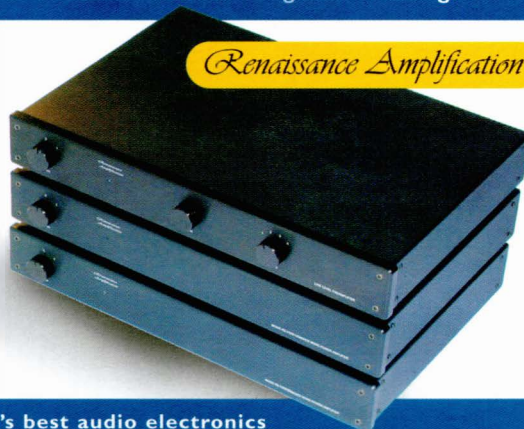
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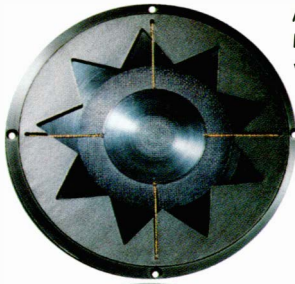
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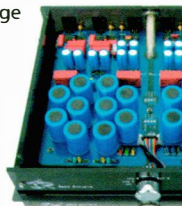
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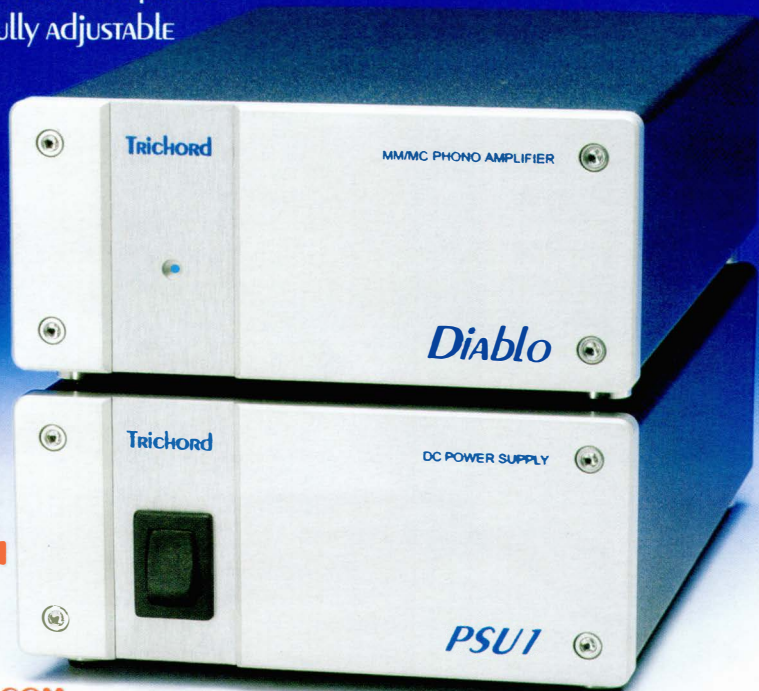
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Power



# The ExactPower EP15A Sub-cycle Regulator

by Roy Gregory

Huh? I can almost hear you scratching your heads. What on God's green earth is a sub-cycle regulator? Well, that's a good question – and when it comes to ExactPower's EP15A, it's pretty much the only question.

Okay, so let's back up a bit. Mains quality and its effect on hi-fi performance isn't exactly news. Nor are most of the many and various responses to the problem, ranging from battery power supplies through to the dogged insistence that any deviation from a bog standard IEC mains lead (as supplied with your shiny new unit) is not only a waste of money but actually detrimental to the sound quality. Leaving the religious crazies aside for the moment, most of us have reached the conclusion that what we use to connect our equipment to the wall socket has an audible effect. How important that effect is: how big; how manageable and ultimately how relevant; is where we generally differ. However, slowly but surely there's a school of thought emerging that says that your mains cables are not just the first link in the chain but also the most important. Once you get your head round the fact that there are good reasons to take that point of view seriously even if, ultimately, you reject it, then the vast expenditure of energy on just about anything to do with getting electricity from the socket and into the system begins to fall into some kind of perspective.

Of course, the range of "cures" on offer goes way beyond simple cables. Isolation transformers, parallel and in-

line filters, various bits of black magic, all are out there – and all have both their advocates and their detractors. But the Rolls-Royce of mains treatment remains, unquestionably, the regenerator.

Like just about everything else to do with the mains, regeneration has received a mixed press. The first and in many ways the most impressive units I've come across are the well-received Accuphase designs. However, these are both seriously expensive and offer a strictly limited capacity, such that a CD player and solid-state pre-amp is about all you can connect to the smaller version. Even a low-powered integrated proved too current hungry, while valve electronics are seriously problematic. Other cheaper incarnations such as those from PS Audio are not nearly as successful, while attempts to jazz-up the formula with additional features seem to have diluted the engineering rather than reinforced it.

Enter then the ExactPower designs (there are two, the EP15A reviewed here, and the EP20A which offers higher capacity and more outlets). The basic principle that underpins the concept of regeneration is that you take the mains as presented by the wall-socket, clean it and break it down (generally to DC) and then use that DC to run a high-power amplifier which outputs a steady 50 (or 60) Hz. This is fine in theory, but with two major stumbling blocks: any grunge that you don't eliminate is promptly amplified and the power rating of your amplifier limits the available current at the

output. And that's before you even get to the issue of internally generated grunge from the device itself. Perhaps it's not surprising that regenerators that work cost an arm and a leg!

ExactPower have managed to pull-off that cleverest of tricks, employing some seriously sophisticated technology to actually simplify a process. Rather than trying to smooth or filter the incoming signal, what they do is amend it! The EP15A generates its own internal, amplitude stabilized AC reference. This is then used for comparison with the incoming AC power. The clever bit is that the unit then applies real-time, feed-forward correction to that incoming waveform, trimming and shaping both it and the voltage as it goes. Naturally this requires some considerable on board capacitance as well as a blindingly quick response from the circuit itself. The capacitance is there to see, the circuit is, frankly, well beyond my ken. However, for those of a technical bent there's a ton of material available in the form of a white paper published on the company's website. ExactPower claim correction within the space of a millisecond, while the ability to deal with discrete parts of each individual cycle explains the unfamiliar terminology adopted for the name. (We could of course just call it a "mains conditioner" and have done with it, but that rather misses the point.)

The resultant, cleaned signal is then used to drive the output power amp, resulting in plenty of



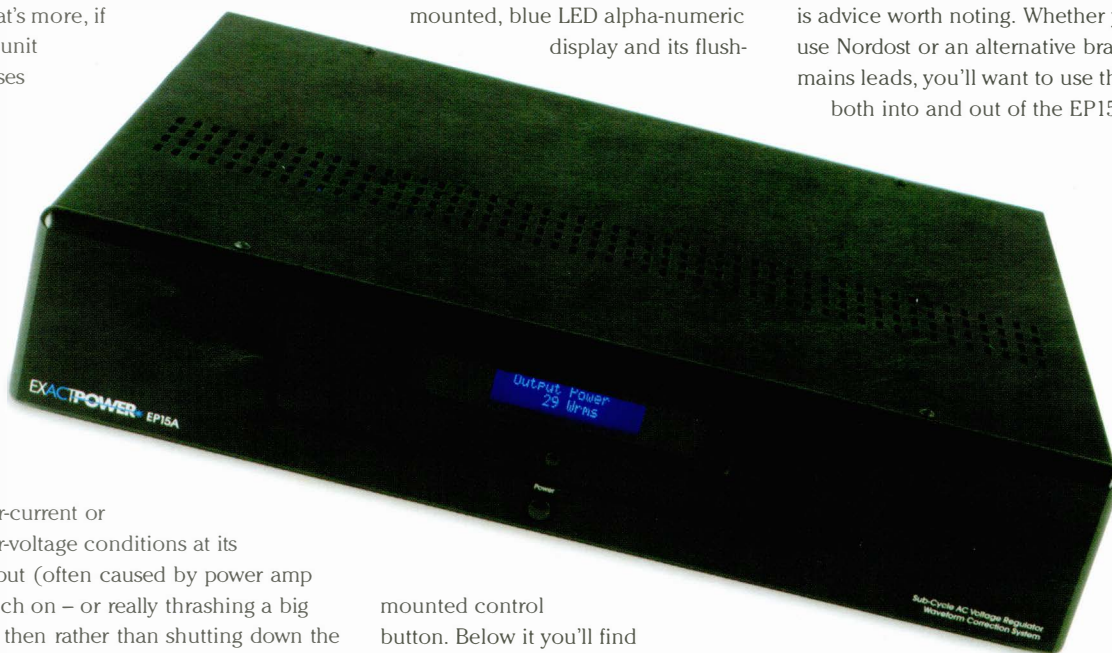
▶ headroom and a significantly less intrusive overall solution – one with a few interesting fringe benefits. Because it doesn't stand between the supply and the amplifier, the circuit is in no way current limiting, supplying 15 Amps from each of its output sockets, while the amplifier itself can handle a continuous output of 1300 Watts. Its output impedance is also actually lower than that of the wall socket, further aiding audio performance. What's more, if the unit senses

possible high-frequency oscillation of the output circuitry.

The unit itself is housed in fairly slim, standard width chassis, unsurprisingly, roughly the size of a compact, solid-state power amp. But don't let the svelte exterior put you off. Lift the lid and the interior is packed, which probably accounts for the substantial 14kg weight. The front panel is beautifully contoured and visually it's relieved by a feature line that surrounds the single, centrally mounted, blue LED alpha-numeric display and its flush-

on the US version offer a significant potential advantage here. However, in theory, all you have to do is plug the ExactPower into the wall and the system into it and away you go. In practice there are actually a few decisions to make. Yes, you can do it the ExactPower way, but I actually preferred a slightly different approach.

First issue is the question of mains leads. ExactPower actually offer the option of buying a Nordost Vishnu power cord along with the unit, which is advice worth noting. Whether you use Nordost or an alternative brand of mains leads, you'll want to use them both into and out of the EP15A.



over-current or over-voltage conditions at its output (often caused by power amp switch on – or really thrashing a big rig) then rather than shutting down the system, it simply shuts itself down. The system simply reverts to unregulated power, direct from the wall feed until the EP15A is able to re-impose the corrected signal, normally after four seconds or so. I don't know exactly how long because even my most enthusiastic efforts failed to cause a flutter. Over voltage at the input is another matter, and spikes of over 245V or dips below 200V cut power to the outputs in order to protect the system. Also, because it doesn't employ brick-wall filters to block high-frequency irregularities, but simply corrects them, it remains a truly wide-bandwidth device. However, both EMI and RFI filtering is included, thus preventing

mounted control button. Below it you'll find the main on/off switch. The EP15A is available in either a black or silver finish to suit different set ups; and while we're on the subject of finish, it, the fit and graphics are all first rate. This is a product that can be sat happily next to even the most esoteric equipment without spoiling the view.

The rear panel offers an IEC input and five (eight in the US) 13 Amp sockets. These are divided up, three for analogue units and two for digital, the latter employing additional filtering to prevent digital nasties getting back into the unit. That's about your lot. The EP15A has sufficient capacity (if not outputs) to run even large and complex systems. The extra outputs

This unit is not an alternative to decent leads, rather it complements and underpins their performance. Likewise, I preferred the sound of the system running from the Thor distribution unit, itself plugged into the ExactPower, rather than connecting the system direct. Now, there are a number of possible reasons for this, not least the fact that the Thor itself is not a passive unit. However, the most prosaic is that employing the Thor not only star-earths the system but allows connection to my clean-earth spike sunk in the garden. The lack of an earth post on the ExactPower is, in my opinion, ▶

▶ a regrettable oversight, albeit one that should be easily correctable.

With the system connected as described, operation is simplicity itself. Turn the EP15A on first, then turn everything else on. The display will tell you the output voltage. Toggle the switch and it tells you the output current. Toggle again and you get the total power load being drawn (useful to ensure that you're not over taxing the unit). A final push disables the display, leaving just a single blue power indicator to show the unit's status.

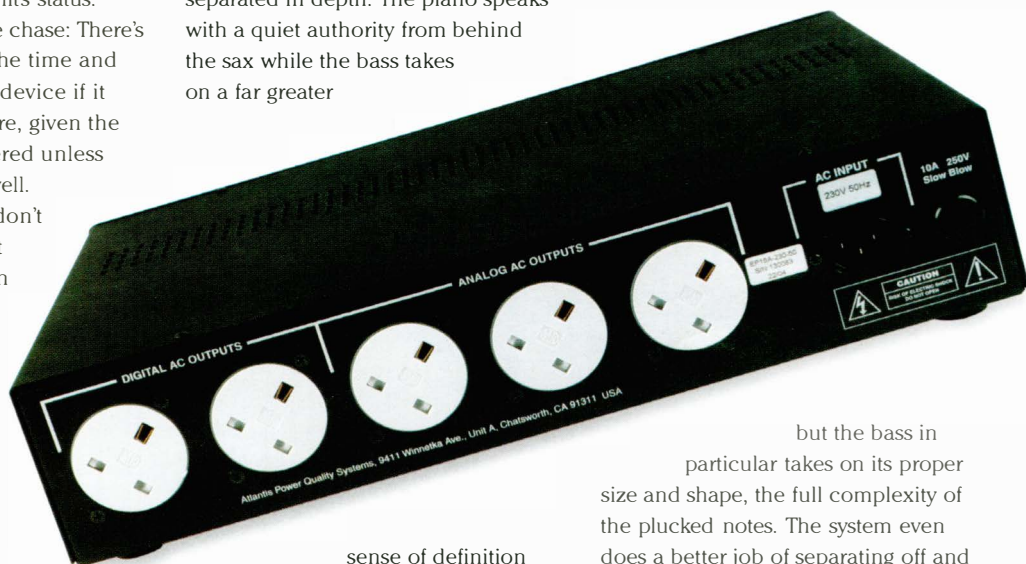
Right, let's cut to the chase: There's no way I'd have spent the time and trouble describing this device if it didn't work. What's more, given the cost, I'd not have bothered unless it worked really, really well. It does. In fact, whilst I don't have an Accuphase unit available for comparison I'd say that the ExactPower is just as convincing, somewhat cheaper, and to all practical purposes, far less limited in application. All good stuff you'd have to agree.

As to the specifics, connecting the system in the way described, using an analogue output from the EP15A to drive the input of the Thor distribution block, the differences are far from subtle. Breaking them down, let's start with the soundstage. You'd expect added stability and a quieter, blacker background and those you get. But the upshot of those improvements is a deeper and far more coherent soundstage, with far more solid and dimensional images. Playing the *Andante* from Haydn's *String Quartet Op 64 No 6* (Opus 3 8403) the overall acoustic is far more apparent, as is the location of the instruments within, both contributing to a significantly greater sense of spatial coherence. But that

coherence extends to the music as well. The instruments are richer and more present, their contribution to the whole delivered with greater poise and purpose.

Likewise, Wes Montgomery's *Full House* (OJC20 106-2) has greater body and presence. Take the opening title track: it's easy to lose the contributions of both the piano and the double bass. With the ExactPower feeding the system, the various instruments are physically fleshed out and better separated in depth. The piano speaks with a quiet authority from behind the sax while the bass takes on a far greater

Wes Montgomery disc. 'I've Grown Accustomed To Her Face' is a poignant ballad played with minimal accompaniment. Montgomery's notes are delivered with a delicacy and poise that is quite captivating, the shaping of his phrases a thing of beauty. But what really comes to life is the brush work of Jimmy Cobb and the beautifully restrained interjections from Paul Chamber's bass. Not only are the instruments clearly placed and separated,



sense of definition and independence, contributing rather than simply stumbling along.

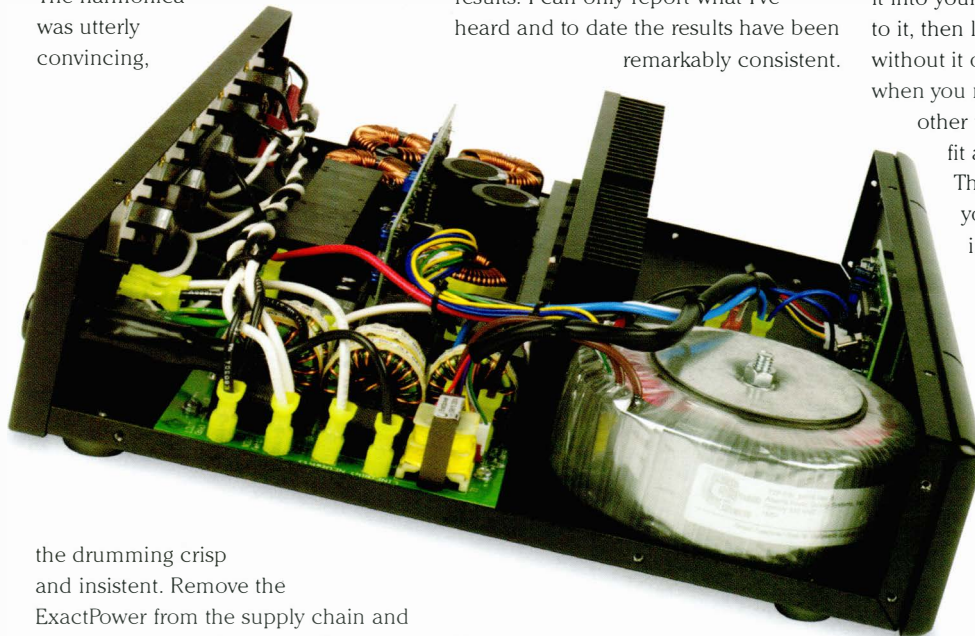
What's happening here is that the notes from each instrument are developing their full harmonic character. It gives them a rounded richness and weight that rings true, yet at the same time the massive improvement in micro-dynamic resolution that enables these changes ensures that the shape and placement of notes is far more explicit and precise. In other words the sound is both sweeter and clearer, rather than trading one attribute against the other, as so often happens. Or to put it another way, the presentation is more natural, both in terms of tonality and presence.

Just listen to track two on the

but the bass in particular takes on its proper size and shape, the full complexity of the plucked notes. The system even does a better job of separating off and rendering irrelevant the low-level tape noise that's present. But the best I've kept for last. Suddenly the intimacy and directness of contact between Montgomery and Chambers is as plain as the nose on your face. The depth of their relationship, their shared musical appreciation is writ large, the contribution to the impact of the haunting, almost melancholy track huge. When the last note dies away and the audience explodes into applause for this, the least flashy of the tracks on offer, you really understand why. An enhanced listening experience? I should co-co...

In many ways the acid test for the ExactPower is removing it from the system. Playing 'Midnight Shift' with the EP15A operating, I marvelled ▶

▶ at the solid presence and natural warmth in Greg Sarfaty's voice, the clearly resolved tonality of each acoustic guitar string. The harmonica was utterly convincing,



only used it in two different environments – my old listening room and the new one. Different equipment in a different place might produce different results. I can only report what I've heard and to date the results have been remarkably consistent.

Meanwhile, and with those caveats understood, I'd heartily recommend experimenting with the ExactPower EP15A. I rather suspect that, if you put it into your system and get accustomed to it, then like me you'll be loath to do without it once you hear what happens when you remove it. In fact, there's one other thing that ExactPower should fit and that's a by-pass switch. That way you could reassure yourself that you are not imagining the magnitude of the difference that this outwardly simple box makes. It looks like regeneration is finally coming of age – and getting cheaper too! I like it when that happens... ➤+

the drumming crisp and insistent. Remove the ExactPower from the supply chain and the soundstage collapses, the images shrink and congest, the sound goes edgy, thin and tinny. It's quick and there's plenty of pace on proceedings, but the subtlety's gone and with it the naturalness and most of the expression. Whilst there are those that will find the regulated supply smoother and less exciting, I say listen a little longer, 'cos in reality there's plenty been added and nothing taken away. In fact, dynamics are quicker and wider, they're simply more natural.

Any piece of hi-fi that seeks to interpose itself between your system and its environment is subject to several important caveats and the ExactPower EP15A is no exception. I've not tried it with enough equipment, and perhaps more importantly, enough types of equipment to investigate its universal application. In particular, I've mainly used it with smaller Class A and Class AB amps like the Rogue Audio Atlas and Tom Evans Linear A and B. A really powerful Class AB design might well find it out. Likewise I've

US purchasers receive units fitted with four digital and four analogue output sockets (high-quality Hubble designs). Against this the five large 13 Amp sockets on the UK version seems a bit mean, even if the limitation is imposed by the case dimensions. Of course, used the way I prefer it isn't an issue, but those wanting to connect an entire system directly to the EP15A might actually investigate purchasing one with NEMA type socketry and mains leads to match. Hard to do mind you, if you already own a mains loom. I'd also like to see that earth post fitted.

One thing I haven't tried is connecting non-critical components direct to the ExactPower rather than to the Thor – mainly because I don't have any. But imagine a high-end, two-channel set-up with a DVD player and surround sound decoder attached for watching the odd movie. Attaching those two units to the EP15A's digital output sockets rather than the main distribution unit could be a very good thing indeed.

#### TECHNICAL SPECIFICATIONS

Type:	Phase-locked, feed-forward AC power correction and protection device.
Outlets –	
UK:	5x 13 Amp sockets
US:	8x Hubble Nema sockets
Input Voltage Range:	200 – 245V (UK)
Output Voltage:	230V ±2%
Peak Output Current:	25 Amps peak-peak
Dimensions (WxHxD):	17 x 3.5 x 14.7
Weight:	14kg
Finishes:	Black or Silver
Price:	£2250

#### UK Distributor:

KonnectSon UK Ltd  
Tel. (44)(0)1480 434441  
E-mail. sales@konnectson.co.uk

#### Manufacturer:

Atlantis Power Quality Systems, Inc.  
Net. www.exactpower.com



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- Paul Messenger, Vertex AQ Review, Hi-Fi+ Issue 29



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# Main Connections...

## Power products from IsoTek and Powerigel

by Paul Messenger

Mains electricity is the prime mover for virtually every hi-fi system on the planet, and once upon a time it was a very clean source of power, delivering a pure 50Hz alternating sine-wave at around 240 volts from a low source impedance that can therefore deliver massive current. Techniques increasingly adopted by electronics engineers over the past twenty or so years, however, have gradually dirtied it up, creating all sorts of spurious which can get into and adversely affect the sound of a high quality hi-fi system. There's also been dramatic growth in the use of the radio frequency (RF) spectrum, and the various connecting cables – including mains leads – can act as aerials that pick up RF and can cause their own interference with the delicate audio signal.

Both these factors are relevant, but there is the important caveat that their effects are thoroughly unpredictable. By their very nature they'll vary according to the system components, the particular quality of the local mains, and of the immediate RF environment. Any attempt to get to grips with these effects has to be viewed as somewhat tentative, because it's impossible to say with any certainty that the findings with any specific system or geographical location will necessarily apply across a wider context.

I've long been something of a sceptic where mains conditioners are concerned. It all goes back to the mid-80s, when I tried out an early and very simple example – I can't remember its name, though I think it began with an L, and presume it was some kind of filter – with decidedly disappointing results. Whatever its possible effect on

smoothing and removing spurious from the mains, it also slugged most of the life and drama out of my Naim-based system, and led me to view subsequent mains treatments with some suspicion.

I daresay this device might have proved beneficial in a different system, as Naim amps are notoriously fickle about mains connections. At the time, Naim's founder, the late Julian Vereker, brusquely observed that putting anything between his products and the mains was not a good idea, as it was likely to increase its source impedance and hence the ability to deliver large quantities of current rapidly. He further pointed out that nothing could provide a lower source impedance than the enormous steam turbine generator sitting in the power station. Soon after I'd tried that early mains filter, I tried increasing the size of the fuse feeding my hi-fi mains spur from 15A to 30A, hence lowering the source impedance, and was quite shocked at the obvious improvement this brought about.

However, things have moved on a lot since then, the mains and the RF airwaves have continued to get dirtier and more polluted, and there's now a much greater understanding of the issues involved. A wide variety of mains-related products are now available using a number of different techniques, from simple (and not so simple) mains leads through to complete electronic mains regenerators. Overseas brands like Accuphase, PS Audio and Burmester have enjoyed some success with elaborate and costly units, while the last few years have seen British brands like IsoTek making waves here in Britain with

products that are rather more affordable.

This feature looks at a number of different mains strategies, in the context of a top quality Naim-based system driving a pair of B&W 800D speakers, with various ancillaries and



accessories from Vertex AQ, Rega, Linn, Harmonic Technology, The Chord Company and Magnum Dynalab. My own mains is wired on a separate spur from the consumer unit via a 40A circuit breaker, feeding a block of eight good quality Crabtree sockets via 30A cable. The house is in a residential area about 100m away from a substation and well away from any industrial activity, though a forest of cellphone antennae sit atop a water tower 300m away.

Before getting started on any comparisons, I naturally had to unplug and re-plug all the existing mains leads, and a number of other connectors, and this was a reminder – yet again – of the value of doing just that to any system on a regular (ie every few months) basis. Plugging and unplugging has the effect of cleaning any corrosion from the contact points (hence lowering the impedance), and invariably improving the sound quality in consequence. ►

▶ Avoiding as many fallible contacts as possible is a major rationale behind a rather strange looking device called a Powerigel (pronounced Powereagle), a component developed by Naim's German distributor Music Line, and specifically oriented towards supplying mains power to a multi-component Naim system.

Looking like a manga version of the Magic Roundabout's Dougall, it consists of an alloy tube perched on pointed leaf-spring feet and about a foot long, out of which sprout a number of mains leads with woven fabric insulation. The one that comes out of the 'nose' is terminated by a regular mains plug; each of the 1.7m leads that emerge from the body is terminated by an IEC (ie kettle) plug. Inside the case, all the relevant wires are welded together, so the whole system is connected via identical mains power and earth leads from a single plug. The Powerigel is not yet distributed in the UK, though Naim Audio can supply it direct. It costs from £525 for the six-outlet version; eight- or eleven-outlet versions are also available at modest extra cost. All that wire hanging around can be difficult to keep tidy, but that's really the only practical complaint.

Having burned it in by feeding the power amp for a few days, I got serious with the Powerigel, connected it up to the whole system, and was quite shocked at how good it sounded. Characteristically Naim-like, inasmuch as it makes no concession to sweetness, the total sense of coherent togetherness was thoroughly convincing and involving, while the bass end showed extraordinary and unexpected extra power, depth and weight. Imaging too was significantly improved, making the already very impressive B&W 800Ds sound even more 'out of the box' than before, with sharper focus and a bigger sound-stage.

My experiences with the original Isotek mains products were not that

positive, as they didn't seem to suit a Naim-based system that well. However, the Isotek products have since been completely redesigned as the GII-series, allegedly with Naim suitability much more in mind, and first impressions with the new conditioners was much more positive, as least as far as the 'higher end' models are concerned.



By which I mean the £1,425 Titan and the £1,495 Nova, two slightly different and quite sophisticated mains conditioners which are used in tandem to provide the ultimate Isotek performance. I did briefly try the much simpler and less costly MiniSub GII (£495), but this wasn't up to handling a top end Naim system, even though it could well be worth trying in a more modest system context.



The Titan and Nova have much in common, but the chunkier Titan has just three mains outlets, uses fixed filtering, and is primarily intended for use with power amps. Besides two unswitched 13amp sockets for use with power amps, there are two high capacity (20amp) Neutrik mains sockets: one supplies the Titan with power from a wall socket via a supplied lead; the other is an output socket that can be used with an Isotek Multi-Link adapter to increase the number of sockets available in order to supply pre-amps and sources.

However, the preferred technique for feeding these components with lower power requirements is to use a Nova alongside a Titan, specifically for those lower power components. Nova has six 13amp sockets, each of which is equipped with 'adaptive gate' filters that adjust themselves to supply optimum filtering for the component that it is feeding.

Whereas the original upmarket Isoteks used enormous isolating transformers, the GII conditioners are based on elaborate filtering – a nine stage series and parallel configuration for the Titan, while the Nova uses a six-stage primary and five-stage secondary filter configuration with adaptive gating. To achieve the best possible transient and dynamic performance, both units have exceptionally high peak power capabilities, and are fitted with non-intrusive circuit-breaker protection.

So how does this elaborate filtering affect the sound? Considerably, is the short answer. The purpose of mains conditioning is to remove any 'nasties' that might get into the system via the mains, and the Titan/Nova combination was undoubtedly effective in 'cleaning up' the sound and reducing the audibility of background 'grunge'. The midrange in particular benefits, so that lyrics are more easily distinguished on, for example, ▶



► 'Neighborhood 3 (Power Cut)' from Arcade Fire's album *Funeral*.

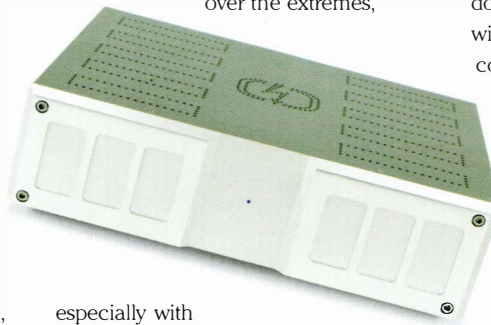
However, if that's the good news, it was also true that the conditioners changed the character of the Naim system quite significantly, and not always for the better. Certainly there was less coloration and a greater sense of control, but there was also less sense of freedom and a slight loss of overall coherence. Whereas inserting the Powerigel with no conditioning at all had somehow enlarged the image and taken the sound further out of the speaker boxes, substituting the Titan/ Nova combo tended to reverse the process, tying the system down more tightly through its combination of control and cleanness, improving the central image focus but also the boxiness.

Deciding which is preferable might well be a matter of personal taste, or even come down to the characteristics of an individual recording. It was certainly a close call with the rather dirty and very complex Arcade Fire album, whereas Laurie Anderson's super-clean *Life on a String* – a hugely welcome return to form from an outstandingly creative artist – clearly sounded preferable via the Powerigel, to these ears at least. Furthermore, the Titan/Nova combo did seem to lose out a little in the low bass, showing an occasional tendency to 'thump', and mildly compromising tonal differentiation.

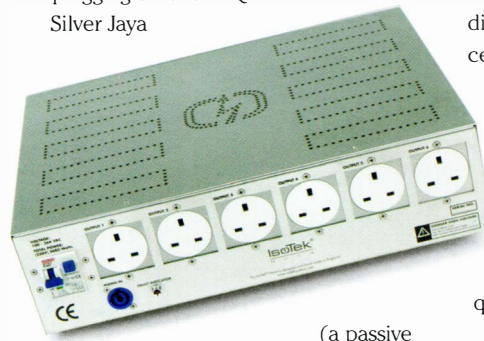
That straight A versus B comparison was undoubtedly interesting, but many possible permutations and combinations offer rich possibilities for experimentation. Amongst the most likely were to combine the Powerigel with just the Titan or the Nova alone, so benefiting from both the filtering and the single-point connection and earthing.

The results were a combination of the two, and sounded rather better than the more buttoned-down full monte Titan-with-Nova combo. Fine voice

clarity and intelligibility is combined with notable stereo image precision and focus, though the combination does seem to emphasise the midband a little over the extremes,



especially with the Titan. Bass seemed a little drier and less obvious than with the Powerigel alone, which is actually no bad thing with the 800Ds, and if the top end lacked some sparkle and air, plugging a Vertex AQ Silver Jaya



(a passive mains vibration absorber) into the Titan's second socket seemed to bring a little extra sweetness to the top end.

Ironically, since it's not really intended for use with big power amps, the Nova seemed distinctly preferable to the Titan, since its insertion was significantly less intrusive and its action more gentle. The bass was cleaner and deeper, the treble more open and sweeter, and in many respects the Nova/Powerigel was the best all round combination, with or without a Silver Jaya.

To summarise, the Powerigel really did the business in a Naim system context, which is no surprise in view of its origins, though it does lack flexibility – you can't experiment with alternative

mains leads here, and I'd really like to have tried combining it with the vibration-damping Vertex AQ Roirama mains leads. Both the Titan and Nova do a fine job of cleaning up the mains without introducing too much sonic constraint, though they do slightly shift the overall tonal character of the system. Of the two, the Nova proved the least intrusive and most satisfying, whereas the combination of the two involved the heaviest sonic compromise. While some mains filtering might well be beneficial under any given circumstances, do take care not to overdo things.

One could go on... and on... experimenting with different permutations, and I probably will for as long as the various bits remain at my disposal and my patience lasts. This has certainly been a very interesting and educative exploration so far, and has really rammed home the message that the mains is a vital ingredient in defining the overall sound quality of a system – or at any rate in defining the performance of an upmarket Naim-based system operating in a quiet provincial environment. ➤+

#### TECHNICAL SPECIFICATIONS

IsoTek Titan	£1425.00
IsoTek Nova	£1495.00

#### Activ Distribution

Tel: (44)(0)1635 291357  
web: [www.activdistribution.com](http://www.activdistribution.com)

Powerigel from £525 (6 outlets; 8 or 11 also available)

#### Naim Audio Ltd

Tel: (44)(0)1722 332266  
web: [www.naim-audio.com](http://www.naim-audio.com)

#### Vertex AQ

Tel: (44)(0)1454 326496  
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# The Audio Analogue Paganini 24/192 CD Player and Puccini Settanta Integrated Amplifier

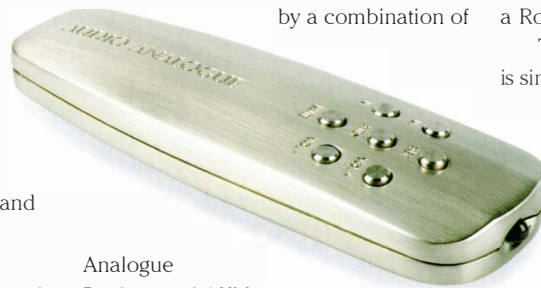
by Alan Sircom

Back in the day (the day being the mid 1990s), Audio Analogue had one of the hottest products on the audio menu. That product was the Puccini SE. In the great tradition of the NAD 3020, the Naim Nait and the Pioneer A-400, the Puccini SE was a giant-killer integrated amplifier; not powerful but with the heart of a musician. In many respects, Audio Analogue's reputation is built upon this one wonderful product.

Times change, things move on, and Audio Analogue suffered a bit of a wilderness period. The products subsequent to the Puccini SE were good – some of them very, very good indeed – but the magic bit was lacking. Then, last year, a bit of a sea-change came over Audio Analogue; it got its mojo workin' ... again. The tiny Primo CD and amp are distinctly entry level, with all sorts of limitations to the power, dynamic range and bandwidth, but the bits that sound good, sound great. There was a rumour at the time that changes were afoot in the rest of the range. The rumours were true; Audio Analogue has redesigned the Paganini CD player and Puccini integrated amplifier, both forming the key Compositori range.

The first was the £950 Paganini 24/192 CD player. Although externally similar to the previous Paganini model, the internals are entirely different. It uses a CD-ROM drive from a PC. This means the draw has that creamy-pale livery of PC products, not the charcoal-grey sled we have come to expect from our CD players. It also means the disc takes an age to go from standby to play, especially

if the device has to open up and accept a disc. Still, the trade-off is arguably more reliable than any traditional audio-designed CD transport this side of hand-made Linn and Krell products. The digital audio itself is handled by a combination of



Analogue Devices and AKM chips, the latter being drafted into use for the 24-bit digital conversion process. There is nothing particularly substantial about the internal organs of the Paganini 24/192, but you don't expect substantial from a CD player. At least, not on the inside.

The exterior of the Paganini is discreetly elegant and, except for the big logo beneath the display, the perfect example of understated 21st Century European opulence. All the controls are removed to the centre of the player and arranged in a hexagon; they are all tiny buttons with even smaller text beneath them, save for the larger, central play/pause button. The two-deck blue-green LED to the left is informative without being garish and all that's left is the CD drawer, which is flush-mounted and finished in the same business-like brushed alloy finish. The rest of the player is similarly built, with big, solid WBT plugs for the phono analogue and digital outputs. Minimalism rules – don't

expect rolled edges to the case, Toslinks or XLR outputs. This is a basic player, but 'basic' need not mean 'cheap'; this is basic in the way a Leica MP is 'basic' compared to a Nikon D2x, or the way a Noble M400 is 'basic' compared to a Rolls Royce Phantom.

The £950 Puccini Settanta amplifier is similarly basic, in all the good ways.

It is considerably more minimalist than previous Puccini designs.

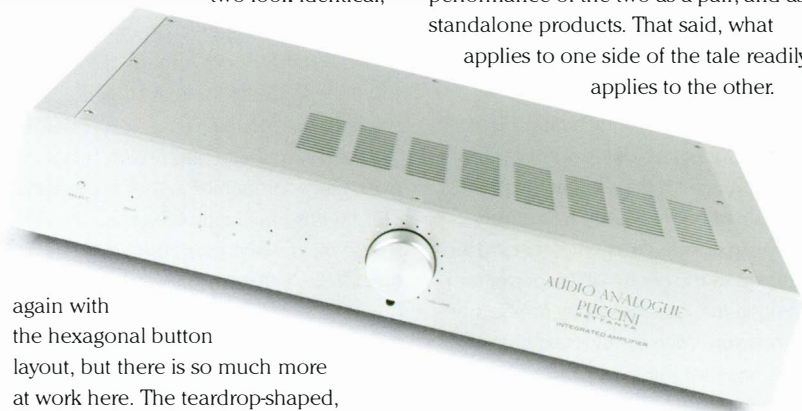
The front panel has just a volume knob a series of LEDs and a single button to rack through the inputs. The back is more feature-filled, with two pairs of solid WBT speaker terminals and six WBT phono inputs and two sets of outputs. There is also an earth terminal for the optional MM/MC phono input that can be assigned to input one. It also has grilles cut into the alloy top plate to dissipate heat (it gets warm to the touch).

Audio Analogue has an advantage over many companies in that it is Italian. This means practically everything can sound nicer when pronounced in the lingo. Take 'Settanta' for example; to our Northern-European ears, raised on a diet of Anglo-Saxon, 'settanta' sounds sexy. It could be an opera movement, a type of instrument, the surname of a beautiful screen goddess of the 1960s, a type of car, scooter, sports jacket... or maybe even a seafood dish. In fact, 'settanta' merely means 'seventy', the power delivery of the new Puccini. This amplifier delivers Settanta Watts per channel, as did the smaller Primo before it.

▶ In fact, the Puccini Settanta seems to have more in common with the Primo Settanta than the Puccinis of old. The old Puccini and Puccini SE amplifiers were highly traditional affairs, using good old selector switches and volume pots. Back then, a remote control was very much an afterthought. These new designs are entirely modern in their approach, being built from the ground up to be remotely controllable. The source selection and volume control on the front panel all connect back to logic gates, not potentiometers and relays. The volume control is driven by a bufferless resistor network driven by this logic circuit, meaning the amplifier never has less components in the signal path than the more traditional route.

One of the really clever features entailed within the design of the Puccini Settanta is that it comes with a set-up mode. This allows you to fully disable the pre-amp stage, turning the amp into a power amp. You get to specify which input, too.

Despite the almost utilitarian feel of the main products, there is still a touch of baroque opulence, and that comes in the shape of the remote handsets. The two look identical,



again with the hexagonal button layout, but there is so much more at work here. The teardrop-shaped, chrome-plated metal handsets feel solid, although their weight seems to slightly move in the hand like quicksilver. Despite the lump of metal the handset is hewn from, it never feels cold to the touch. This is the prime selling tool of the Audio Analogue dealer; if you try out these products, they will put the remote

in your hand. You, in turn will invariably say "Ooooh", while raising and lowering the handset through about 10cm in a way of giving yourself ownership of the remote's weight. And, you will be impressed, too. Fortunately, the handsets don't seem to collect fingerprints. This is a good thing because you can guarantee that anyone who sees it will want to play with it, totem-like.

Best of all, you can give in to your evil side; when someone asks "Oooh, what are they?" as they reach for the pair of handsets, wait until they pick them up and say "alien artefacts, and they are mildly radioactive" and then make a short, buzzing sound. Don't worry; the handsets can withstand being dropped. There are two sides to this story; the performance of the two as a pair, and as standalone products. That said, what applies to one side of the tale readily applies to the other.

But there is some kind of golden synchronicity that makes a stunning sound when the two products are conjoined and this cannot be overlooked.

Starting with the CD player, it has the sort of smooth sheen that makes for very relaxing digits. There's none of that steely

bright thinness that can sometimes emerge from less-than-stratospherically priced CD and the word 'Analogue' in the AA name seems appropriate here. This is a very analogue-y player, with a sound that's warm and mellifluous, plus a true walk-in



soundstage. Music through the Paganini is always enjoyable and entertaining, in a slightly warm, relaxed kind of manner.

Of course, this warmth and image size comes at the expense of some up-beat rhythm and dynamic energy. This isn't the sort of player designed for those who's musical tastes began and end in strict 4/4 time. Nor is this the sort of player for people who only listen to Mahler's *Eighth* or Wagner's *Ring Cycle*. But, if the sound isn't the most obvious and upfront, its strengths are more broad-spread. This is one of those players that doesn't have obvious sonic failings, but is also one of those players that doesn't shout its benefits too loudly. It almost creeps up on you, the refinement and naturalistic performance becoming all the more attractive with time spent listening.

In contrast, the Puccini Settanta is more immediate. Turn the thing on and immediately it sounds beguiling and sweet sounding... and as it warms up, so the performance gets better and better. The soundstage opens up, detail levels increase and the whole sound gets that bit more immediate and direct. The sound quality is so distinctly better than the competition at the price it seems churlish to criticise. It's an immediate thing, once you turn the amp on, you like the sound or are unmoved. ▶

► Nothing will sway you from that initial perception. Those who disliked the sound from the outset will not like it later, but they are in the minority.

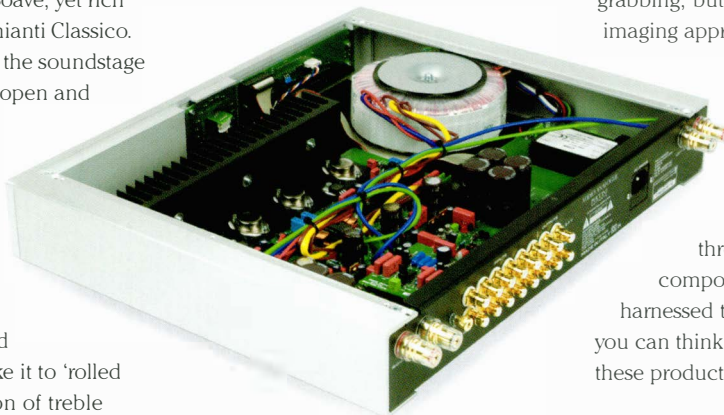
What's so special about the Puccini sound? It's like a cool-running Class A amplifier, sweet and open, as natural and as crisp as a glass of Soave, yet rich and robust like a good Chianti Classico. Imaging is the big bonus; the soundstage of the Puccini Settanta is open and deep and preternaturally natural. It's not bloated, but expansive.

There is a slight sense of tailoring here, though. It seems the treble is ever so gently laid back (it doesn't even make it to 'rolled off', it's just the impression of treble softness, not a perceptible curtailment of high frequencies). This only serves to sweeten an already sweet pill, bringing the weight of an orchestra to the fore and preventing the shrill overproduction of some grotty pop recordings.

There is a good sense of rhythm to the Puccini, far better than the Paganini. The Puccini is still not rhythmically tight, in the manner of traditional British

harmony as well. In short, music sounds beautiful, here.

But, then there's the two together. Adding the Paganini to the Puccini really brings out the good points of both, while smoothing over the limitations. In particular, the two combined have a

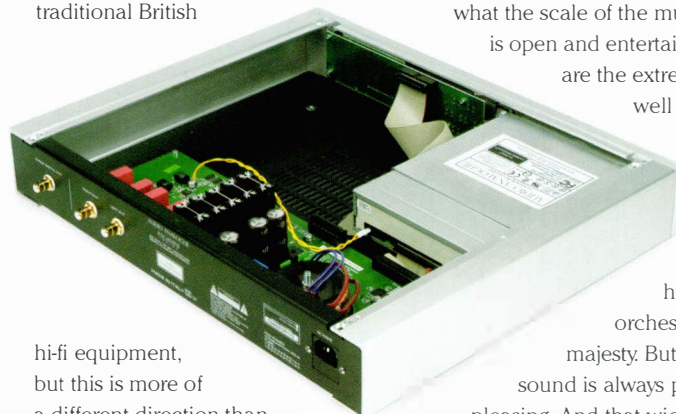


coherence that is quite wonderful. Sounds have a sense of physical presence that is usually found with products that deliver more image solidity than these two; there is no sense of bolted down solidity, but instead the sounds ebb and flow around the soundstage with a liquid sense of vitality. Within limits, it doesn't matter what the scale of the music is, the sound is open and entertaining. The limits are the extremes; extremely well recorded voices in a natural acoustic can sound slightly veiled and really huge dynamic orchestral swings lack majesty. But otherwise, the sound is always pleasant and pleasing. And that wide soundstage and beautiful coherence will make the combination the jazzers' first choice.

There is a distinct path here. If you are moving from a standing start, buy both. If you have an existing system, slot in the Puccini Settanta first, then migrate – if necessary – to the Paganini 192/24 at

a later date. The chances are, if you love the Puccini, you will soon grow to love the Paganini too. Of the two, the Puccini is the real star – if you like the sound, as many do, it's immediately better than similarly priced competitors. The Paganini isn't as night and day attention-grabbing, but its soft-edged, wide-imaging approach to CD replay sneaks

up on you, especially through the Puccini. Okay, so there's never going to be people lining up to play thrash metal or hard house through the Audio Analogue components, either in tandem or harnessed to other components, but if you can think outside of the beatbox, these products have plenty to offer. ►+



hi-fi equipment, but this is more of a different direction than any substantive 'lack' on the part of Audio Analogue. The Puccini has a distinct sense of bounce to its timing; rhythm is not imposed with an iron fist, clinging rigidly to the melody, but allows the music to hang together, finding the broader sense of timing across the

#### TECHNICAL SPECIFICATIONS

##### Paganini 192/24 CD Player

D/A conversion:	192kHz/24bit
Output Level:	2Vrms
Dimensions (WxHxD):	445x85x385mm
Weight:	11kg
Price:	£950

##### Puccini Settanta Amplifier

Inputs:	5x line-input (RCA/phono)
	1x phono-stage (RCA/phono)
Line Input Impedance:	47kOhm
Line stage gain:	12dB
Phono Input Impedance:	47kOhm (MM), 100Ohm (MC)
Phono Gain:	40dB (MM), 60dB (MC)
Outputs:	1x pre-out (RCA/phono)
	1x tape-out (RCA/phono)
	2 pairs WBT binding posts
Power amp gain:	26dB
Output power:	70W p.c. @ 80hm
	125W p.c. @ 40hm load
Size (WxHxD):	445x85x405cm
Weight:	14kg
Price:	£950

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# The Arcam Solo CD Player Receiver

by Alan Sircom

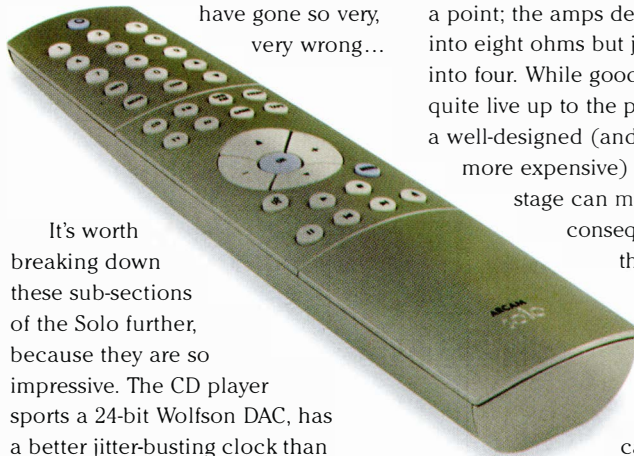
Arcam's changing. A few months ago, the company changed hands in a management buy-out. But, perhaps the more obvious change is typified by the new £1,000 Solo. Naturally, the Solo was designed far in advance of the change in ownership, but it kind of highlights what sort of innovations neo-Arcam will be capable of.

The Solo is one of those up-market integrated units, like the Linn Classik or the T+A K-1. It comprises CD player, DAB/FM tuner and amplifier. It's not got the classic style of DiVA or FMJ kit, but has a cool look all of its own. In fact, to many eyes, it makes current Arcam equipment look like 1990s museum pieces and this may well be the shape of Arcam to come. The centre-mounted CD transport sits atop a big, friendly and blue display and is flanked either side by inset buttons. Then, there's the chrome pac-man like power switch and the input and headphone output minijacks. All this in a standard Arcam-sized box, which is rounded across the front and looks a bit like a big version of the Mac mini, only without the white plastic top. Even the remote control – usually an Arcam bete noir – has been subtly revised to look good and function brilliantly.

In fact, the way to make the Solo is comparatively easy, if you are Arcam. You take an existing CD player (in this case, the CD73), add in much of the DT91 DAB/FM tuner (an AM/FM tuner in countries where there's no DAB), mix them together and add new ingredients (like a 50 watt amp-on-a-chip, for space, and a clock with

four alarms, for convenience) and the rest is just programming and product design. Of course, it helps that the raw materials like the CD73 are so damn good in their own right. And it also helps that Arcam has spent decades developing integrated, sophisticated products similar to this one. But, you

can see how it could all have gone so very, very wrong...



It's worth breaking down these sub-sections of the Solo further, because they are so impressive. The CD player sports a 24-bit Wolfson DAC, has a better jitter-busting clock than most players and can read CD text and CD-RWs, as befits a CD73. The tuner stage is also the standard Arcam fare, as it samples the analogue FM sound, too. Arcam squirts both DAB and FM through the same aerial, but this need not be a problem; most people will chose either DAB or FM and stick with it. But it does mean you may need a bigger, better outdoor aerial than DAB normally needs to get decent FM reception.

The IC-based amplifier stage is a wholly new departure for Arcam, as the company has, to date, built discrete amplifiers or amp modules. There is good reason for the change, however – space. There is no available

real-estate within the case, so the chip-based option is a fait a complis. Even squeezing down, there is still need for a large heatsink sticking out the back of the Solo. Arcam did a lot of listening prior to implementation to find the right form of chipset - one that didn't ruin the sound in the process. They've succeeded, up to a point; the amps deliver 50 watts into eight ohms but just 75 watts into four. While good, this doesn't quite live up to the power doubling a well-designed (and considerably more expensive) discrete amplifier stage can muster and as a consequence, partnering the Solo with more troubling speaker loads should be approached with a bit of caution, if at all.

That said, practically any mainstream speaker (bookshelf or floorstander) that is likely to be partnered with a convenience product like this one will perform extremely well.

The whole package is perfectly integrated and all runs off a series of pagged menus from the large front-panel display. Although, the set-up isn't as easy as some devices (simply because the Solo has a tuner that needs installing and a timer that needs adjusting), the Solo can be up and running inside of half an hour, especially with the easy to follow manual in tow. You'll probably still need to refer to the manual ▶

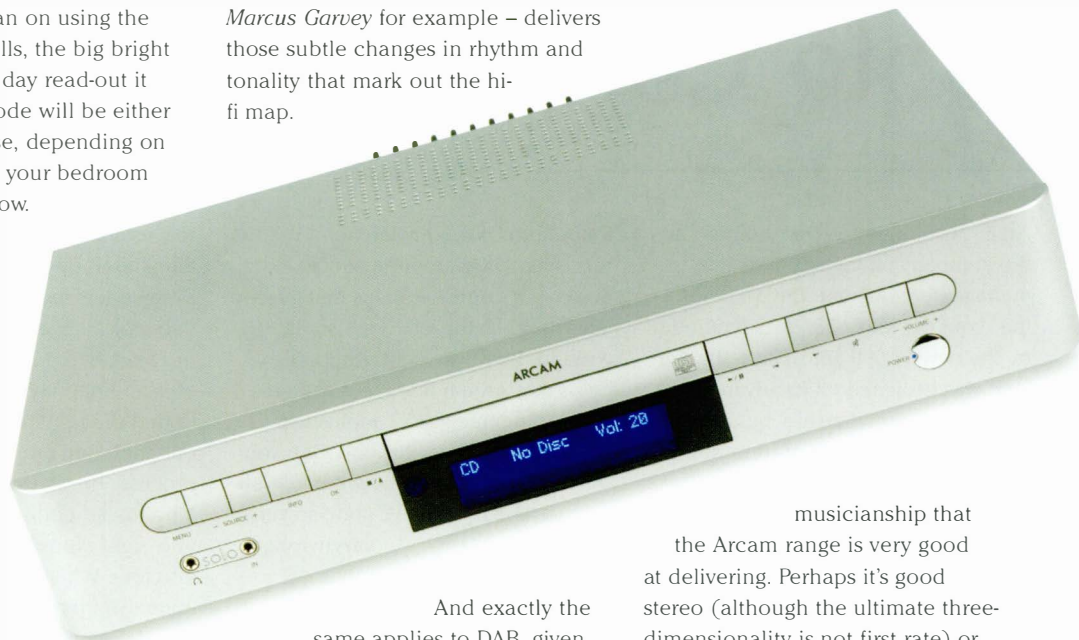
▶ for a couple of hits if you plan on using the Solo as a big alarm clock, but otherwise, it's entirely fit and forget. If you do plan on using the Solo for wakeup calls, the big bright blue LED time and day read-out it gives in standby mode will be either a blessing or a curse, depending on how much you like your bedroom bathed in a blue glow.

Normally, integrated hi-fi systems are met with a sinking feeling on behalf of the reviewer or hi-fi enthusiast; it's akin to a petrolhead having to take the wheel of a Smart car or a Toyota Prius. It just lacks the cachet of cool needed to stir the blood. The Solo is an exception. Pretty soon after switching the thing on, you stop considering it as an integrated unit and think of it as hi-fi in less boxes. This sounds like a petty distinction; in fact, it's the most important definition we can give it – the Solo crosses the line between hi-fi and mere audio faster than any previous integrated unit.

It begins with the detail retrieval. You start to hear sounds from your discs that you have come to expect to be swamped in lesser audio. Those microdynamic changes in level, those subtle nuances that help define the

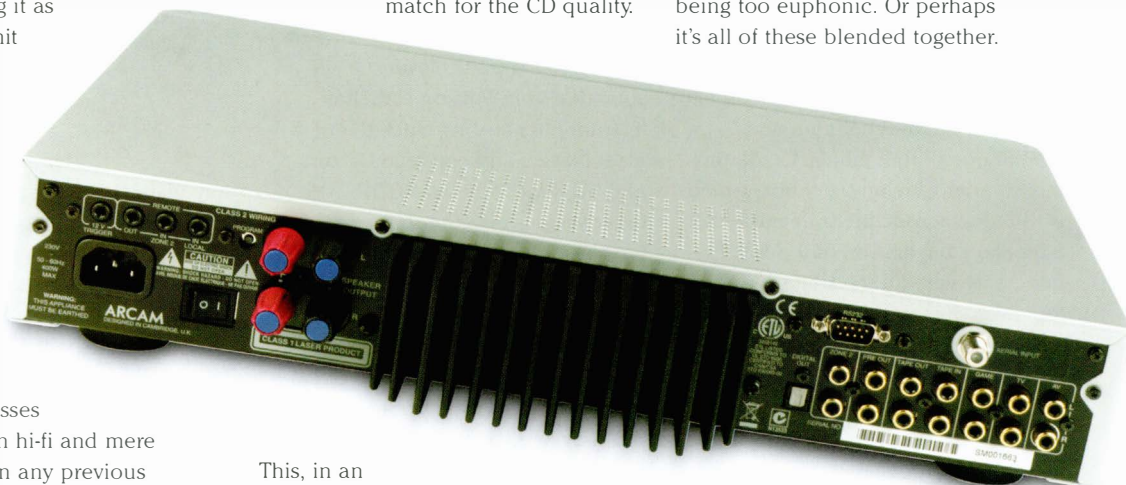
sound and justify the expense of hi-fi are not lost here. Even a comparatively raw disc – Burning Spear's *Marcus Garvey* for example – delivers those subtle changes in rhythm and tonality that mark out the hi-fi map.

Detail isn't everything, though. The Solo has that sense of living, breathing



And exactly the same applies to DAB, given the broad caveat of the seemingly dreadful quality of most DAB broadcasting. The Solo does the best of a bad job, pulling reasonable sound from digital radio, but it's no match for the CD quality.

musicianship that the Arcam range is very good at delivering. Perhaps it's good stereo (although the ultimate three-dimensionality is not first rate) or refined and honest vocal articulation, or maybe it's just the seamless coherence of the whole thing. Or maybe it's the slightly warm overall sound; rich and inviting without being too euphonic. Or perhaps it's all of these blended together.



This, in an upsetting manner, is a demonstration of the Solo's quality, in that it doesn't try to bring CD down to DAB's performance level. Just as with a separates system, DAB becomes a rich source of sound, but a secondary source compared to CD.


Whatever it is, the Solo has it. There is simply a sense of rightness to the sound that well-chosen separates have and integrated systems rarely provide. ▶

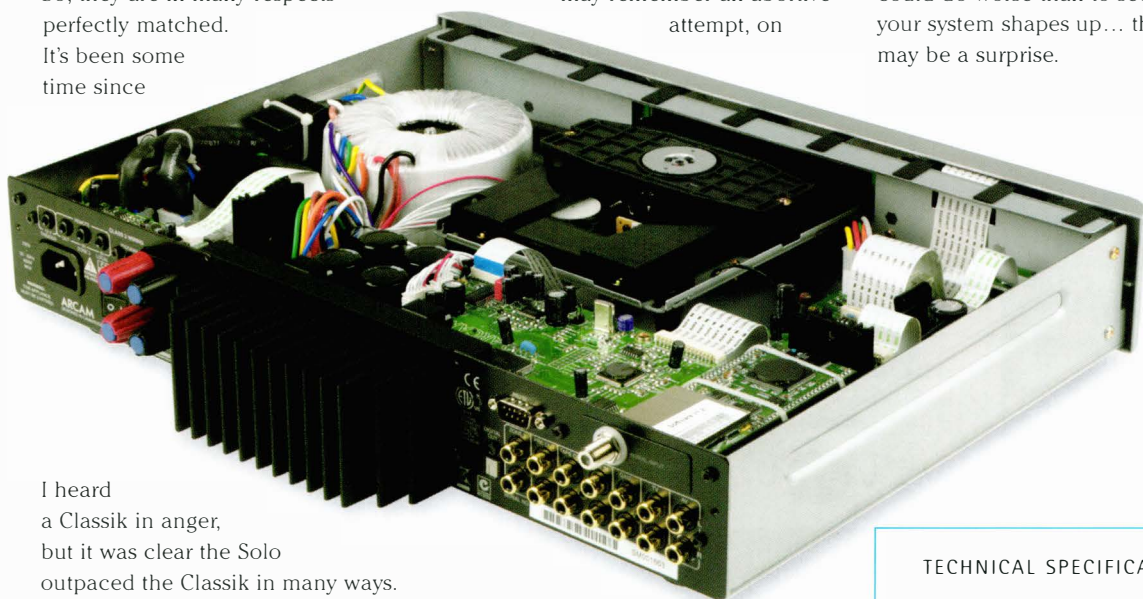


▶ There's an obvious rival in the Linn Klassik. The older Klassik lacks DAB, but instead features integration with Linn's multiroom Knekt system. So, they are in many respects perfectly matched. It's been some time since

amplifiers. Even today. So, the Solo's 'limitation' is more of an observation, in fact.

Those who follow these things may remember an abortive attempt, on

deal more than the Solo that fail to reach the performance it can muster. This little gem practically defines where hi-fi begins, you could do worse than to see how your system shapes up... the results may be a surprise. 



I heard a Klassik in anger, but it was clear the Solo outpaced the Klassik in many ways. The sense of detail and openness of the Solo places it far above the Klassik. It's not a total trouncing of the Linn, though; the Klassik has the edge when it comes to a meaty and direct delivery of the sound, it's just that the sound of the Solo is ultimately more attractive. The Solo has the edge when it comes to connectivity, too; the little iPod-chummy front mini-jack input alone will sell it to a generation.

The limitation – of sorts – is the amplifier stage. This is the place where the one-box nature of the Solo makes its presence felt. The chip amp has all the right tonality and clarity to slot nicely into Arcam's portfolio, but it's neither a powerhouse nor does it have the absolute transparency needed to match the CD player. But, let's be really, really honest about this; the amplifier stage of the Solo has better imaging and is more dynamic and is simply a better amp than any Arcam Alpha model of the early 1990s, and that puts it in the top percentile of

behalf of the reviewer, to find the starting place of hi-fi, the entry level where the music standards still remain, but the price is definitely affordable. I now realise, I was peering down (up?) the wrong hole; the starting place of hi-fi is not separates, it's the Arcam Solo. I simply can't think of a separates system that provides CD, tuner and amplifier with anything like the performance of the Solo for the money. Now, all we need to find is a pair of speakers to go with them...

It's a shame we hi-fi types can be so dismissive of systems like the Solo. "It's great for bedrooms or second systems", we say, effectively disposing of the product as Not Quite Hi-Fi. The Solo deserves more and if you listen to it, you will find out just how much more. OK, let's not get carried away; this won't make you hand in your Townshend CD player or trade up from your Conrad-Johnson pre-power amp, but there are many ill-matched systems costing a good

#### TECHNICAL SPECIFICATIONS

Type:	Integrated CD player, DAB/FM tuner and amplifier
Inputs:	4x line-level
Outputs:	2x line-level 1x headphone 1x mini-jack
Integration Options:	12v trigger inputs/ outputs, zone two phono outputs, RS 232 port
Aerial Input:	Shared DAB/FM
DAC Chipset:	Wolfson 24-bit delta-sigma DAC
DAB Chipset:	AKM 96kHz, 24bit Delta Sigma DAC
DAB Sensitivity:	-98dBm
FM Receiver Sensitivity:	2µV
S/N Ratio (@ 200mV):	58dB
Power Output:	75Wrms (4ohms, 1kHz)
Dimensions (WxHxD):	430 x 80 x 350mm
Finishes:	Silver only
Price:	£1000

#### Manufacturer:

Arcam  
Tel: (44)(0)1223 203200  
Net. [www.arcam.com](http://www.arcam.com)

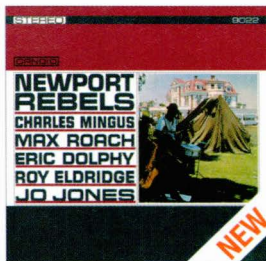
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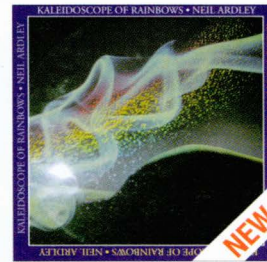


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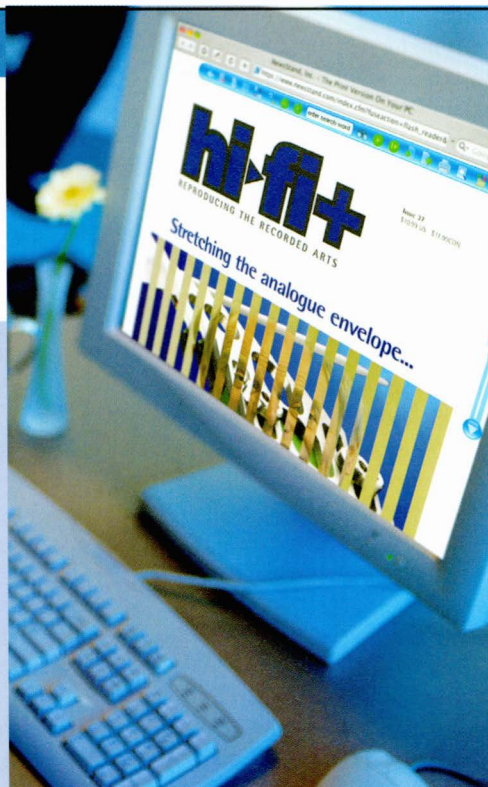
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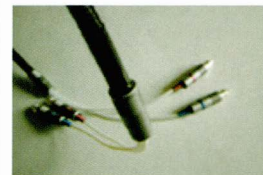
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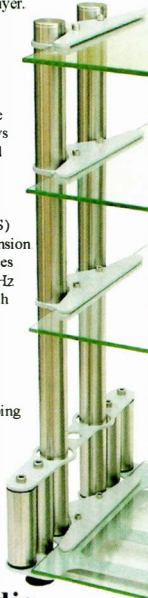
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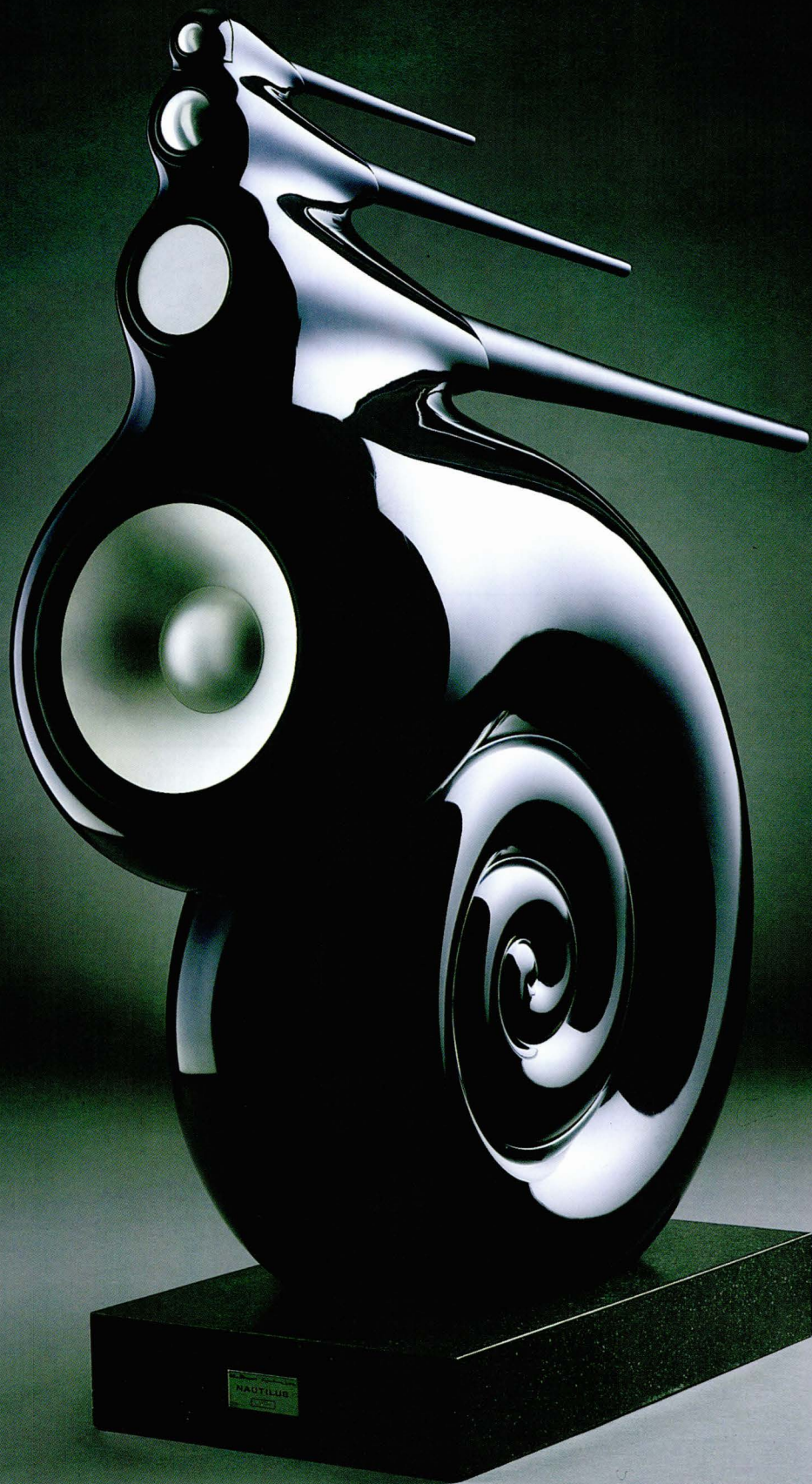
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NADTILUS

# Model World...

## The theory and practice of pistonic drivers

by *Martin Colloms*

'Imperfect' is the best description of the technology and theory used to design and manufacture loudspeakers. While hi-fi speakers differ from one another, sometimes quite dramatically, the variations between other audio components such as CD players or amplifiers tend to be rather less obvious. Indeed, these components differ sufficiently subtly to require some experience combined with a critical temperament to identify and grade them. So, it's rather curious that the evidently imperfect loudspeaker – the final electro-acoustic component in the audio chain – nonetheless has the power to reveal such subtle differences in sound quality further up the line, right down to those imparted by audio cables and other scientific heresies.

Our bodies sense external stimulation in many different ways, decoding those inputs to create a meaningful response. The listening experience is itself a multi-dimensional one, comprising an emotional, remembered and aimed-for subjective response to complex aural stimuli that bring the enormous power of the human mind into action. In objective terms, there are huge errors to be seen in the performance of loudspeaker systems. Yet, with a fine performance, well-recorded, musical values and nuance can be successfully conveyed to the listener.

There is absolutely no question that loudspeaker quality is critical to the process of musical reproduction. Yet, as much as our ears identify errors of timbre and coloration, on the other hand they may forgive such errors if they are not too severe. There is a valuable adaptability inherent in hearing whereby we can almost unconsciously forgive moderate frequency response errors despite their accompanying false tonal colour.

The reason for this is both clear and easily understood. Take a standard, busy and noisy room. Without it, we would be unable to separate the sound sources we want to understand (the person we're speaking to) from the cacophony of background and reflected noise. In such an environment, even an unfamiliar one, the ear rapidly learns the underlying acoustic character of the space, the mind resets its internal processor to largely strip out the confusing noise, enabling the consciousness to focus on the identified sound sources. From a manifestly jumbled technical acoustic – a racket – clear meaning is extracted. Such extraordinary ability is innate, yet it's this that comes to the aid of the

imperfect loudspeaker, allowing us to hear the music content more clearly despite possible inherent imperfections. So, despite clearly identifiable objective errors in the loudspeakers' output, the ear can still decode the sense of the musical signal.

Step back into our busy room for a second. Most of the spurious sound that hits us is reflected. Interestingly, the longer the reverberation time, the harder it is, the longer it takes, for the ear to adapt. For example unless you are in the front row, listening to an orchestra in a typical church can be unnerving, so muddy and echoic is the initial aural experience. Yet without consciously trying, as the minutes pass, the orchestra slowly comes into focus, the swimming, reverberant dominance appears weaker and weaker, and soon a degree of equilibrium is achieved. Certainly the innate character of the location is not lost to the listener but it may no longer dominate the perception. This ability highlights this near magical aural facility.

The implications of all this for the design and assessment of loudspeakers are profound: On the one hand, if the audible imperfections present in a speaker's output are of the kind to which the ear can readily adapt, then the speaker may still perform well. On the other, while an A/B comparison test will strongly expose superficial differences, an extended audition to just the one model will be needed to find out whether it will actually satisfy a listener in the longer term. In designing a speaker, the engineer must weigh these aspects and considerations carefully in defining the final balance, something which is easier said than done. A minute examination of all aspects of construction, materials and operating principles can be made, yet there may be so many possibilities that it can be hard to know where to start. To begin with a fundamental issue, all things in nature have the facility to flex or bend. Such bending, if present in the audio frequency range, has the capacity to generate audible sound, which whilst desirable in the case of a bell, is definitely undesirable in the case of a loudspeaker enclosure panel.

Loudspeakers are devices operating with powerful sources of vibration. Drive unit motors and their components, enclosure panels, grille frame, drive units and all parts thereof, are potentially capable of flexing and generating unwanted sounds. These are not properly

▶ related to those which are supposed to mirror the electrical audio power applied to the loudspeaker from the amplifier, derived from the audio signal itself.

Then there is the particular element of the loudspeaker that is specifically intended to radiate such sounds, namely the diaphragm. It may be flat or more commonly cone shaped. If employed for higher frequencies it may be rather small, perhaps just 25mm (or one inch) across, and shaped in the form of a shallow dome, usually convex but occasionally concave.

Unwanted bending in the other speaker components is a hassle but may be largely addressed through intelligent, experienced build. But the diaphragm is the very devil to get right and its innate character often dominates the resulting sound.

A diaphragm needs to be very light in order to provide sufficient loudness but also needs to be stiff to avoid buckling. A flat sheet of cone material might cease to be rigid, or behave as one element, at frequencies above 100Hz; when formed as a cone, it becomes fabulously rigid so that first bending is deferred for several octaves. But bend it will, sooner or later and when it does the result is a series of resonances of varying magnitude and complexity. These add a characteristic sound which can detract from natural timbre\*. Often such resonance has an additional aural hue which allows identification of the cone material – plastic, woven Kevlar, or felted fibres – much as we can tell whether a struck object is ceramic, wood or metal. Speaker engineers hate such 'natural' material specific sounds.

Nevertheless in this world of bewildering engineering choice, there is a safe haven that promises the certitude of uncompromised excellence. If we were to assume a cost-no-object project, then the choice (and price) of materials for diaphragms and cabinet, the larger magnets that might be required as a result, could all be accepted. We could design



the loudspeaker system – the collection of drivers and supporting structures – such that these, and the sound radiating diaphragms, never bend, never flex and can never contribute a characteristic sound. It's an attractively simple proposition, but even if cost is no object, it would still be complex and difficult to achieve.

What we would aim for is a pure piston performance where the working drive unit diaphragms will be free

from tonal colour and thus be perfectly neutral. This will only come about if we can also design the system as a whole for uniform perceived frequency response, and thus a natural timbre. You don't just need a near perfect diaphragm but near perfect system/ cabinet design as well – one will be of no use without the other. The moving element, the driver diaphragms, should be capable of covering the entire audible spectrum without breaking up or flexing: Hence the theoretical description of these as pistonic drivers – their surface moves in and out as a single, coherent element.

That piston, an accurate if generally theoretical diaphragm, should be capable of perfectly translating the forces imparted by the magnet and voice-coil current into sound. With unlimited budget and access to materials you might well conclude that a single driver operating in this fashion would be the perfect solution. But as enticing as the simplicity of that model is, in practice real world acoustics present certain problems, which is why the proposition so far has been couched in terms of diaphragms (plural). They're all to do with sound wavelength and sound radiation, and to design a successful speaker they must be solved. But the simple fact is that one pure piston is not going to be enough.

We are able to hear sound over an extraordinary range of frequency, much greater proportionately than for vision, and we hear from nominally 20Hz, where low frequencies give the sensation of pressure, to 20kHz a near inaudible 'tingle' devoid of pitch in the very high treble\*. Mathematically three ▶

\* One option is to actually use these bending modes to control the output and directivity of the cone, thus creating a cone structure that bends in a predictable and desirable way. It's an approach much used in woven Kevlar cones, where the weave allows multiple, symmetrical modes that are mirrored, in and out of phase, thus cancelling their acoustic output. Like everything else in audio, resonance can be a good or a bad thing!

\*This of course leaves aside the whole issue of out-of-band harmonics, with some theorists suggesting that information as high as 100kHz still effects what we hear! can be a good or a bad thing!

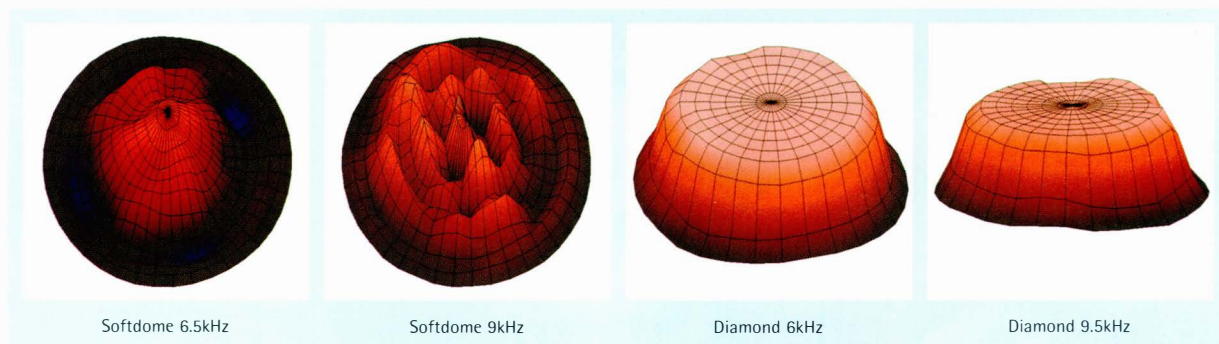
▶ decades of magnitude, it comprises a span of 10 musical octaves and this wide range is problematic, as we shall see.

Sound has a pretty constant velocity at normal temperature and pressure, about 340 metres a second (Mach 1) and the wavelength corresponding to a given frequency is intimately bound to that velocity. Wavelength is mightily important, as it tells us about the size of the sound wave at a given frequency. So, if we accept velocity as a constant, then clearly, wavelength and frequency become intimately bound in generating that constant value. The ability of a diaphragm to couple to the air and deliver useful sound energy to the listening space, is in turn closely related to the size of the diaphragm, and not least the radiated frequency, the latter

Consequently low frequency or bass units have to be relatively large while high frequency units are tiny. If this argument that a single piston drive unit just won't do is not sufficiently convincing then there is a further and highly influential factor.

The parameter called directivity concerns how sound is radiated from a diaphragm, how wide the resulting 'beam' is and how that beam varies with frequency.

For wide directivity, beneficial for an accurate sound not just on axis, but at other angles as well, the size of the sound radiator should be rather less than the wavelength of the sound radiated. A 250mm diameter bass unit will have noticeably worsening directivity above 500Hz. The



determining the 'size' of the launched sound wave.

Once we look at the range of sizes involved the difficulty becomes clear. At 20kHz, the wavelength (a physical dimension, remember) of such very high frequency sounds is less than 2cm long. To achieve reasonable radiation and dispersion, sound favours working with a lightweight diaphragm of similar dimensions. At this high frequency the velocity required for reproduction is so small that very little movement is necessary to deliver useful acoustic power or loudness; the motion invisible to the naked eye.

Conversely, if this little piston radiator was asked to deliver 20Hz, a wave of 17.2 metres, it is unfortunately so small that it would have to vibrate with an unbelievably huge amplitude to generate audible low frequency. We cannot change the fact that for a given sized piston and a given loudness, lowering the frequency by a single octave, eg from 70Hz to 35Hz, requires that the piston or diaphragm movement required must be quadrupled. In effect, low frequency sound is pumped into the environment. The power output of an air pump depends on the area being shifted, multiplied by the amount it shifts or the volume displaced. Loudspeaker engineers may talk here of volume and velocity, volume of air shifted, rather than loudness. Thus, bass reproduction is very demanding in terms of the mechanical and behavioural integrity of a driver, its dimensions and excursion, factors that do tend to work against each other.

signal fed to this drive-unit must be switched over by a crossover network to a smaller driver for the higher frequencies, in order to maintain reasonable directivity. A 120mm driver would be fine for the time being but by the time we reach 2 or 3kHz, frequencies in the mid treble, we will need a second changeover, to a still smaller 25 or 20mm high frequency unit. If we do nothing the sound in a listening room may be bright on axis but dull and thick off axis and in respect of the reverberant room acoustic this is likely to sound rich and less natural.

If the chosen bass driver is rather smaller, inevitably of lower power and with less bass extension, then a 200 or 150mm diameter bass-mid may be coaxed into matching a 25mm tweeter at a crossover point of say 3kHz, certainly with more than acceptable results for the cost. Most loudspeaker systems sold worldwide are in fact built this way, namely the popular and economic two-way. However, the compromises in terms of even dispersion and bandwidth start to become clear.

Returning to our perfect piston story, a moderately sized speaker system designed to operate in pure piston mode with good directivity, and thus smooth off-axis power and frequency characteristics, will require several size-graded drive units as well as the Pandora's box of a crossover to link their outputs together. Now, whilst that undoubtedly deviates from the notional simplicity (and practical impossibility) of a single-driver design, there is a considerable upside. Once we ▶

▶ can divide the audio band between drivers, it actually becomes a practical proposition to create pistonic diaphragms from materials that are both available and affordable. Suddenly we move from a theoretical, cost-no-object fantasy to a very real, real-world possibility.

Historically, pure piston drivers do exist, as do some pure piston loudspeaker systems. Perhaps the most famous was the unavoidably heavy, electroformed copper dome tweeter of the Celestion SL6. First resonance, the departure from piston operation, was nominally just within the audible range at 19kHz. A precision notch filter was fitted to the system crossover whose consequent load factor adversely affected some amplification. This rather highlights one considerable

initiated an undignified scramble to retrofit metal high-frequency drivers in place of the soft-domes used in existing designs – often to the detriment of what had previously been rather well balanced products. Meanwhile Sony and Panasonic-Technics competing for the attention of audiophiles, often using costly advanced honeycomb core composites to manufacture flat speaker radiators of graded size.

However, almost unnoticed, or at least often unremarked, Yamaha had stolen a march on the rest of the industry as far back as 1975, with their NS1000 monitor. While the high quality, fibre cone bass driver of this system owed much to innovations demonstrated at JBL, Yamaha stretched the limits of driver technology by establishing a laboratory facility to

manufacture space age, ultra rigid mid-range and treble dome radiators from the light and highly toxic metal beryllium, vapour-forming diaphragms in special vacuum chambers. The resulting 85mm mid dome and 25mm tweeter were absolutely pure pistons in their working range, predating the latest concave beryllium foil Focal 'Be' designs by nearly 30 years.

Phil Jones' powerful little AE-1 system was also pure piston, using a 120mm, deep anodised aluminium alloy cone bass and a 25mm alloy dome tweeter, setting the stage for a long sequence of related designs. The pace

setting B&W Nautilus speaker of more than a decade ago (the original 'snail' design rather than the much more conventional N800 series) was a full-range, pure piston, aluminium diaphragm system and continues to remain available in its costly, fully active form. But others in this vein are now coming onto the market.

Notable pistonic newcomers are the costly concave ceramic drivers from Theil-Accuton of Germany, their noted 90mm mid driver staying pistonic up to about 12kHz, while their 20mm pace-setting pure diamond tweeter remains rigid to an astonishing 70kHz or so. Their achievement may be judged by noting that for each doubling of frequency, the diaphragm material stiffness needs to be increased by four times for it to remain pistonic. More recently, B&W have also introduced a pure diamond 25mm dome tweeter, fitted to the upper echelons of their latest 800 series. Despite its larger diameter, careful blending of the dome shape to voice coil former tangent has maintained pistonic operation to around the same frequency.



downside of multi-way pistonic systems. For a given material, stiffer almost inevitably also means heavier, which leads to reduced driver efficiency. The stiff materials also tend to suffer dramatic break-up modes once they do flex, requiring sharp filter slopes and consequently complex crossovers, possibly further sapping the sensitivity of the speaker system. In the case of the Celestion SL6, the first break-up mode previously noted resulted in a 20dB spike at 19kHz – which rather unfortunately coincided with the FM pilot signal for multi-plex broadcasts. Consider also a typical pistonic mid-band driver with a 95mm diaphragm. This will probably exhibit first break-up at around 7kHz, well clear of the nominal 3kHz crossover frequency. But with a peak at this point which might be as high as 15dB this is extremely hard to control mechanically, often resulting in the need for a complex notch filter which further complicates the crossover whilst still not totally eliminating the possibility of in-band phase and frequency response effects.

Nevertheless, pistons became quite the fashion with metal dome tweeters in particular becoming de rigeur. This





# Putting theory into practice... The Vivid Audio B1

Based in Durban, RSA, Vivid Audio was founded by engineers Phil Guttentag and Bruce Gessner with Deone Gessner at the head of organisation and finance. In a previous life they were agents for B&W speakers and they saw a personal challenge in going their own way in the speaker industry. In fact they wouldn't have started up without the availability of a useful local engineering base, capable of precision castings as well as steel and alloy tooled components and high quality, acoustically sound, mineral based polymer enclosures.

UK Speaker designer Laurence Dickie, who was almost entirely responsible for creating the landmark B&W Nautilus system, had since gone independent. While busy designing some advanced pure piston units which were intended for a new generation of studio monitors, he was introduced to the Vivid team. Bruce and Philip recognised advanced technology when they saw it, and further input led to Laurence becoming a full partner in Vivid and going on to develop the characteristic loudspeaker systems which they are now releasing on the world market. With three driver designs to play with, it was possible to create three separate systems. There's the B1, a three-way system with a pair of mid-bass drivers built into a medium sized enclosure with an integral stand (\$7,750) and under consideration here. There's also a larger version called the K1 that doubles up on the mid-bass drivers (\$10,750) as well as a centre channel speaker, the C1, that has been designed for home theatre use. More systems are promised.

Laurence is determined to push boundaries, driving both magnet and diaphragm technologies to set new standards in their class. For example, the mid and treble domes (patent pending) employ new catenary contours, while the tweeter, in conjunction with a specified circumferential reinforcement of carbon fibre, pushes the first resonance (the 'failure to remain a piston') up to 40kHz, quite remarkable for an aluminium type; the usual competition resonate rather freely from as low as 23kHz, prejudicing the highest audible registers just a few kilohertz below this. Some driver designers require the expense of the exotic and toxic metal beryllium to get to 40kHz, but Dickie managed it through innovative engineering. Likewise, applying the same principle to the Vivid 50mm upper-mid

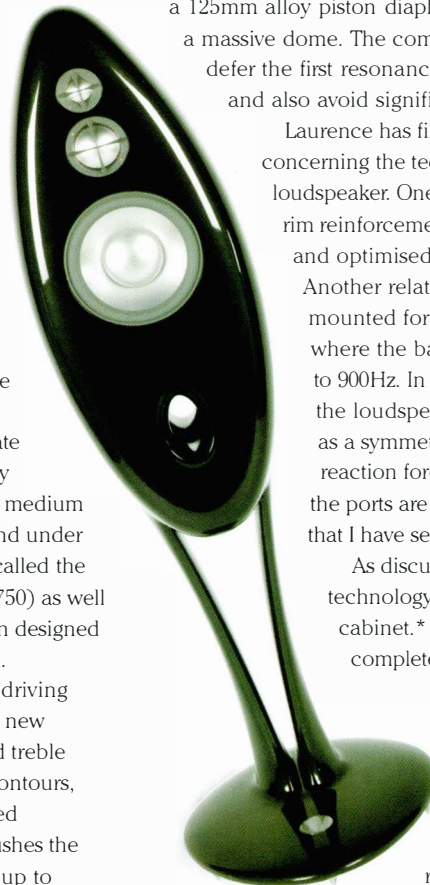
dome radiator, this formed of deep anodised aluminium alloy, results in a class leading performance reaching to 20kHz for first bending, greatly easing crossover design for the speaker system.

The compact bass-mid driver for these designs has a beautiful, open spoke, die cast chassis, free breathing and powered by a dazzling radial neodymium alloy magnet, which presents the smallest possible area to minimise any rearwards directed reflections. This nominal 160mm, '7 inch' driver has a 125mm alloy piston diaphragm reinforced at its centre by a massive dome. The combination has sufficient rigidity to defer the first resonance to an astonishingly high 6.5kHz and also avoid significant 'cone' cavity effects.

Laurence has filed for a number of patents concerning the technology used in the Vivid loudspeaker. One concerns the dome shape and rim reinforcement, designed to maintain rigidity and optimised for maximum bandwidth.

Another relates to the opposed bass drivers, mounted for force cancellation, in particular where the bandwidth of one driver is limited to 900Hz. In the spirit of vibration suppression the loudspeaker has the reflex port arranged as a symmetric opposed pair so that even the reaction forces from the moving air mass in the ports are largely cancelled, the first time that I have seen this used.

As discussed earlier, all this driver technology is useless without a suitable cabinet. \* Ideally, the enclosure should be completely inert, free from vibration, and physically stable to provide a reference platform for the drive units to launch pure sound waves. It is not enough to perfect the mechanical structure and motion of a radiating diaphragm since vibration in its mounting will degrade the accuracy of the radiated sound, a form of Doppler ▶



\*It's interesting to note that the SL6 was rapidly joined by the SL600 consisting of the same drivers in a high-tech aluminium sandwich enclosure where low stored-energy was the watchword. The enclosure decay signature was said to be as fast as the drivers themselves

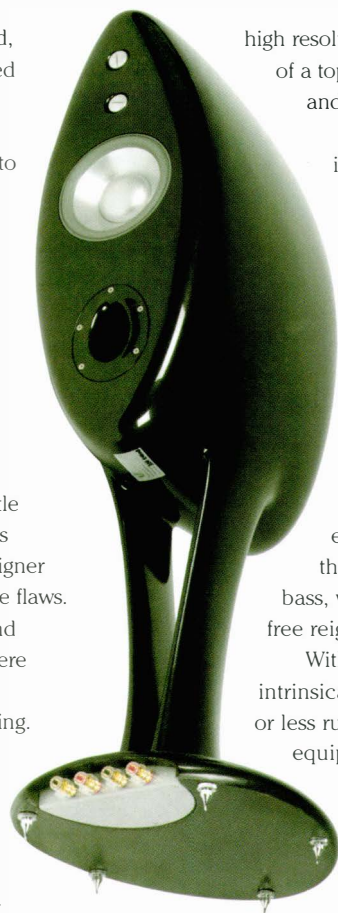
▶ intermodulation. This design has a heavy rigid, shell-like enclosure of immense strength aimed to provide that inert platform.

In addition the smooth blended curvature of the monocoque moulding helps the drivers to launch sound waves free of the diffraction imparted by square edged cabinets. Taking materials, structure, the port arrangement and appearance into account, it's clear that as impressive as the drive-unit technology is, just as much care has been lavished on the enclosures. There is clearly going to be no excuse for poor performance.

Remarkably and yet appropriately, remembering the use of advanced, minimal resonance technology, the Vivid B1 has very little sound of its own. Typically loudspeaker systems are balanced, tuned and tweaked with the designer mindful of the inherent and generally inevitable flaws. Ideally all is skilfully accounted for, blended and rounded out to try and find that sweet spot where it all makes aural sense.

Vivid Audio dispense with such aural juggling. The B1 design aims squarely at the theoretical acoustic frequency response target without the need to make any concessions. So low is the inherent coloration that this speaker almost vanishes into the sound field it recreates, an ideal situation. Much like the best electrostatic designs, its performance seems rather too self-effacing for some. The danger is that it may be felt to be too soft, lacking sufficient projection and attack.

In comparison to almost all other speakers, some aspects of the B1 may best be defined by description of what it actually fails to do. For example, there is no cone 'cry' or midrange 'shout' which in other designs can bring a false sensation of enhanced dynamics and vocal projection. There is no nasality or hardness in the upper crossover region, a defect which can add attack and speed to percussion. There's also no excess in the high range which can cause over concentrated sibilants, excess brilliance, false up-front perspectives and a zingy, excessively 'airy' sound. Furthermore this speaker is totally lacking in the false tonal colour which is associated with the behaviour of cabinet panels. Unwanted enclosure radiation is almost zero with this design. Taken as a whole, these omissions make the sound in some ways reminiscent of the finest electrostatic headphones, if not quite matching this standard for absolute resolution. That said, by accepted speaker standards, the B1 was undoubtedly capable of



high resolution and breathed easy in the company of a top class audiophile system noted for clarity and transparency.

This speaker delivered wide, deep stereo images with impressive layering in successive depth planes. Perspectives were quite stable, very well focused for a variety of programme types and sound levels.

Belying its relatively compact dimensions, it sounded naturally weighted, full bodied with quite deep, generous yet respectably punchy, articulate bass. In a larger, well-damped room, the bass was nicely balanced, tending to favour the USA style of timber frame open plan house than the UK brick built home or apartment. An essentially free space location, well clear of the wall boundary behind it, helps to align the bass, while the mid and treble are then allowed free reign to re-establish top class spatiality.

With a fairly difficult load impedance, and intrinsically generous bass, tube amplifiers are more or less ruled out, as are any ancillaries, cables, equipment supports and sources that are either soft or slack in the bass-mid region. This speaker's inherent precision demands this quality in equal measure from its sources, with no need for additive or corrective 'flavourings'. Conversely in the mid and treble, the B1's almost creamy purity will

tolerate a shade of hardness and brightness which could be unacceptable with other less perfect transducers.

That particular mid and treble purity, so characteristic of big ribbon and electrostatic models, tells of low distortion and this is a distinguishing characteristic of the work, one which engenders greater listening ease, an absence of aural fatigue from this sophisticated transducer. Few direct radiator speakers achieve this; the Sonus Faber Stradavari Homage is one, the Avalon Diamond is another, while historically the Wilson Audio Grand SLAMM also proved the case, by combining a winning 1000W power handling with an easy to drive eight ohm impedance, a high 96dB sensitivity and low distortion, albeit at a truly majestic size and price.

This Vivid speaker teaches refinement, subtlety and the value of layered detail. It can play at any realistic volume and its sound quality remains commendably stable, only the bass 'sharpening' a little when really driven hard. The force balancing and decoupling



► technology promises very little vibration and enclosure readout, and by lab measurement this is certainly true; nevertheless employing firm coupling via the thumb-wheel adjustable floor spikes remains well worthwhile. In return, you will get a substantial gain in low-level clarity, crisper transients and not least, an impression of greater dynamic expression. I found achieving this quality essential if the speaker's inherent 'sweetness' was not to cloy to blandness.

But if all this sounds too good to be true, there are negatives. While this speaker sounded very smooth, pretty well seamlessly integrated over its distinguishable operating ranges (the resonant box system, the bass driver to 900Hz, the upper mid to 4kHz and the treble driver to the edge of audibility and beyond) it was not the most upbeat nor well-paced and rhythmic sounding design in its class. While it's certainly very presentable by absolute standards, with its amazingly focused transient response helping out here, the B1 did not excel so far as foot-tapping drive and listener involvement were concerned. To some degree the quality of its music performance appeals more to the head than the heart, more of an aesthetic than an emotional experience. It didn't catch fire on fast paced rock, but middle period jazz fared well while much of the classical repertory including tough propositions such as opera and solo piano were despatched with aplomb.

I carried out a few tests on the B1, covering basic issues such as sensitivity, amplifier loading, distortion, frequency response and energy storage. Given an appropriate venue, the discussion of these generally excellent results could cover a few pages. Suffice it to say, Paul Messenger succinctly summarised the pertinent technical features of this loudspeaker design, including those opposed and thus force cancelling reflex ports in Issue 32.

Considering the axial frequency response, the designer might find the targets of near zero reaction force and a power response smoothly maintained to high frequencies to be in conflict. Laurence Dickie had has to juggle with the almost perfect omni directional low frequency output from his system deriving from the opposed woofers and ports which then passes through a transition to half space or forward plane coverage somewhere in the midrange, in the region of 500Hz, not far from middle C. Moving up the midrange and before the front facing 170mm bass-mid has a chance to become directional the jump is made to the 50mm upper-mid. Before that narrows its coverage the next transition is to the 25mm tweeter. Such transitions

impart changes in the power response, which may be heard in the driven room acoustic.

I poked a measuring microphone at the B1 and checked a few things out. Sensitivity is a bit lower than claimed – I got about 87dB per '8 ohm watt' at 1 metre over the broad midrange. Even this moderate value is tempered by the fairly adverse impedance which averages 3 ohms in the bass,

(minimum 2.7 ohms at 38Hz) but lifts to close to

12 ohms above 1kHz, underlining the

complex drive requirements of a

system such as this. In my opinion

low impedance cables and

powerful, current capable

amplification is a

prerequisite, adding

significantly to the overall

system price. The K1, being

equipped with twice as much

low frequency radiating area,

achieves the same voltage sensitivity

as the B1 but at twice the impedance and can reasonably be called an 8 Ohm nominal load

Meeting the expectation

of its exacting engineering,

the resonance

decay

properties

were first

class, both

for the

enclosure and

for the drivers.

Decay speed

and frequency-

associated energy

storage were at a minimum

confirming that clean, low coloration

sound. In this regard the measured performance was also

comparable with an electrostatic.

An amazingly close tolerance  $\pm 1.5\text{dB}$  frequency

response was achieved from the critical 80Hz to 18kHz

range while the claimed better than 40kHz for the first

tweeter resonance was also met, measuring 42kHz, this at

the very limit of my Bruel and Kjaer laboratory condenser

microphone. Measured off the central axis, a very good

interpolation of the driver outputs was shown, in many

respects a textbook performance for energy

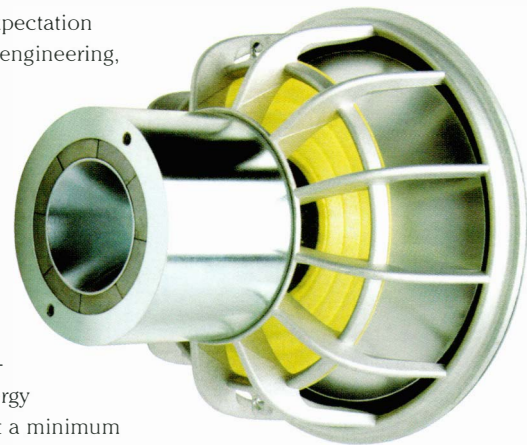
uniformity. So, to put it another way, he

obviously got the driver sizes and cross-

over points right, as well as handling

the potentially difficult frequency

transitions with equal competence.



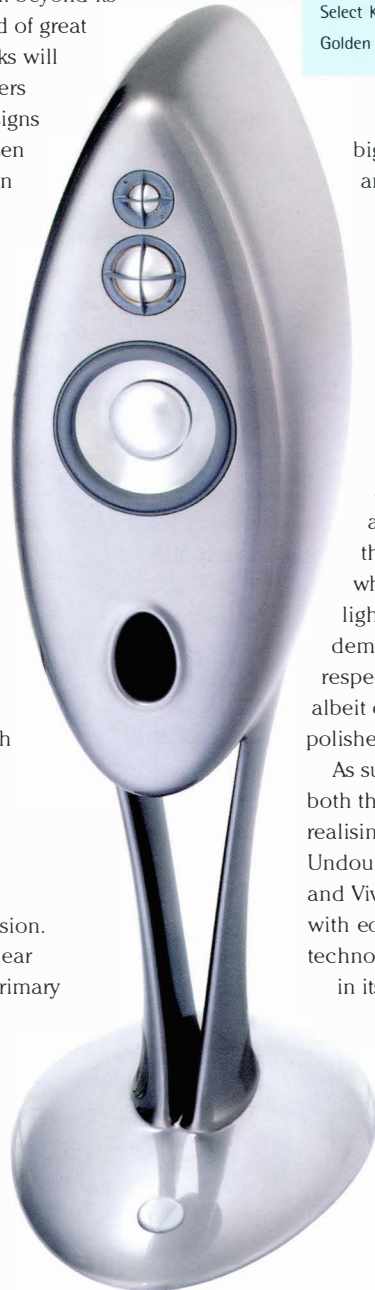
► Low distortion bass was available down to about 37Hz, which is a fine performance for the size of the cabinet.

## Conclusion

Unusual in a world constrained by the vagaries and pressures of a fashion conscious market, the Vivid Audio B1 represents an almost perfect test piece for the technology involved. The pure piston drivers pioneered by Laurence Dickie in his original B&W Nautilus have been honed to a fine focus in this loudspeaker system. It performed powerfully, providing qualities well beyond its price, delivering audiophile sound of great finesse and purity. Its modern looks will suit some interiors more than others while the appearance of such designs is strongly influenced by the chosen colour. It does however succeed in looking smaller than it is.

While some designs are too forward and frenetic the B1 just edged to the other side of the line, being a touch more laid back, spacious, classically balanced but very good for all that. To an extent this reflects the absence of the additive edge and excitement found in other speakers, although long term listening rewards with a totally fatigue-free experience and a growing appreciation of the speakers' unobtrusive, yet seductive qualities. Sympathetic component selection from the matching system is, as always with such a high-quality transducer, essential in helping to create a capable, well-blended sound.

I found much to admire in this marvellously crafted speaker, a work of near watchmaker precision. Its purity and clarity caresses the ear and in a sense encapsulate the primary virtues of an electrostatic in a package that is at once compact, powerful, wide bandwidth and musically sensitive. Stereo imaging was of reference class, while the mildly downbeat, laid back and less obvious dynamic presentation was countered by a



## Associated Equipment

Listening to the Vivid Audio B1s was carried out in the context of my normal system and listening room. For reference and comparison I used the Avalon Acoustics Eidolon Diamond, the BBC LS3/5a (15 ohm) and the Quad ESL 63. Something of the real world was represented by an Epos ES-22. Power amplification included the Krell FPB700cx, conrad-johnson Premier 350SA and NAIM NAP250 (Mk1). For control I mainly used a c.j. ACT2, driven by a trusty NAIM CDS3 CD player. Needing a touch more 'bite' on LP, I used a Linn LP12-Lingo- NAIM ARO combination with a Koetsu RS-II cartridge feeding an AN-S4 step up transformer plus several equalisers. Cables included Kimber Select KS-3035 on the speaker side, with Transparent XL mm and Cardas Golden Reference on the interconnect side.

big, full bodied and powerful sound of great neutrality and intrinsic accuracy.

Vivid are to be congratulated for achieving so much in a thoroughly modern and complete package. With reproduced sound of this subtlety and clarity it compares extremely well with the competition. The B1 successfully represents the virtues inherent in its theoretical approach whilst, even if not eliminating or ameliorating the problems, at least rendering them manageable. Attend to the issues of impedance and sensitivity and the demands they place on the driving amplifier, and this speaker system's inherent neutrality provides the basis for an exceptionally natural system. However, when it comes to partnering equipment, it also highlights the tonal vagaries rendered acceptable or even demanded by less rigorous examples of the art. In this respect, the Vivid Audio B1 is a double-edged sword – albeit one with a near perfectly balanced and beautifully polished blade.

As such it's true to its theoretical model, showing both the benefits and the complex issues involved in realising the potential advantages of piston drivers. Undoubtedly a technical tour de force, Laurence Dickie and Vivid Audio are to be commended for instilling it with equally impressive musical virtues, exploiting the technology as a means to an end rather than an end in itself.



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# Front-end first: a tale of two cables

## The Stereovox HDXV digital interconnect and the Vertex AQ Silver Solfonn tonearm lead

by Roy Gregory

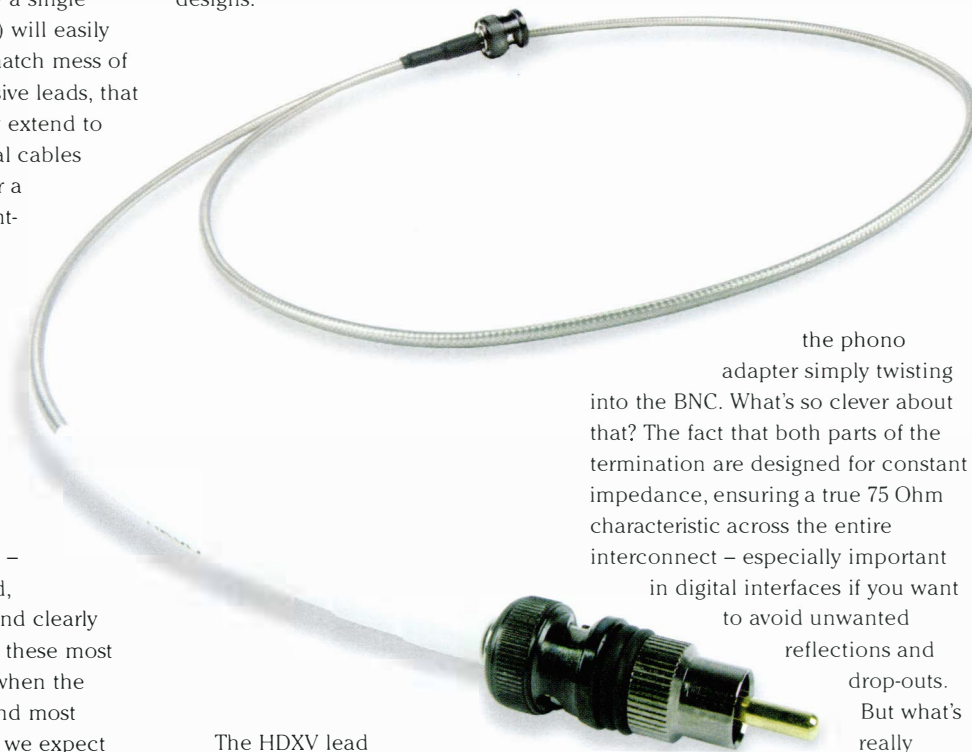
There is, and always has been, one exception to the coherent cable loom approach to wiring a hi-fi system. But, whilst it is easy to demonstrate that using interconnects, speaker cables and power cords from a single source (and that employ a single technological approach) will easily outperform a mix and match mess of even vastly more expensive leads, that logic doesn't necessarily extend to arguably the most critical cables in the system. The closer a component is to the front-end of the chain, the bigger its qualitative effect, yet relatively few cable manufacturers include specifically designed digital or tonearm leads within their ranges. Sure, there are products purporting to do the job – but specifically designed, embracing the precise and clearly defined requirements of these most critical interfaces? Just when the signal is at its weakest and most vulnerable, all too often we expect it to negotiate a less than optimum transmission path. A bit like asking a Ferrari to drive up a cart track, not surprisingly, performance suffers.

Chris Sommovigo of Stereovox

cut his cable teeth designing the expensive but highly regarded Illuminati digital leads. So, perhaps it's not surprising that when he set up on his own, some of the first cables produced were digital designs.

itself is only half the story, but the care and attention to detail that's gone into the conductor can be gauged from the terminations.

These are extremely neat BNC/phono composites,



The HDXV lead featured here is a narrow diameter, flexible 75 Ohm lead intended to interface with either co-axial (phono/RCA) or preferably BNC connectors. Of course, the cable

the phono adapter simply twisting into the BNC. What's so clever about that? The fact that both parts of the termination are designed for constant impedance, ensuring a true 75 Ohm characteristic across the entire interconnect – especially important in digital interfaces if you want to avoid unwanted reflections and drop-outs. But what's really surprising about the HDVX is its modest price. Whilst £70 is hardly peanuts, it pales into insignificance against the majority of the

► competition. The sheer versatility of the Stereovox cable made it a natural when it came to the complex comparisons of expensive DACs that were recently undertaken. Yet even in the company of the likes of Zanden and Metronome, products with stratospheric price-tags to match their stratospheric performance, I was happy to use this unassuming interconnect. Yes, it loses out to the likes of the Valhalla digital, one lead that does possess the correct electrical characteristics as well as greater solidity, substance and dimensionality.

and clogged mid-band that go with it. Yes, you'll also find digital interconnects that genuinely better the HDVX, but it's going to cost you considerably to do so. As it stands, the Stereovox lead sets an important new benchmark for digital transfer – and does so at a genuinely accessible price. Those who wring out their wallets for the last ounce of audio perfection will want something more expensive and possibly better.

separately, which means two earth tags to secure at each end, and are terminated with silver WBT NextGen plugs, a practical as well as a sonic consideration. Whilst my admiration for the performance of the NextGens is well known, the weight of the Vertex cables makes a clamping plug pretty much *de rigueur*. Much of that weight is concentrated in the metal boxes that are located within the length of each cable. With no electrical influence (the silver cable simply passes through them) these are



But in terms of detail, separation and intelligibility there is little to separate the two leads – other than the ten-fold difference in price of course! Where the really expensive lead scores is in the texture and individuality it brings to instruments and images, but in terms of flow, dynamic resolution, rhythmic integrity and overall coherence there's little to separate the two. Perhaps more importantly, the Stereovox shows a clean pair of heels to all the other digital leads I have in house, a collection that spans an astonishing breadth of brands and prices. Characterized by its open, fluid presentation and deft touch, there's a lightness and unobtrusive quality to its performance. Yes, you'll find other leads with a heavy bass but beware exaggeration and the dragging rhythms

Even they would be well advised to consider the HDVX for less critical applications. Mere mortals on the other hand should rejoice: for once, within reach no longer means second best.

Next up is the Vertex AQ Silver Solfonn tonearm lead. A variation on the standard Vertex theme, the tonearm lead is tailored to its task and also includes the essential earth wire. The two channels are presented

designed to eliminate low-level mechanical energy that is otherwise transmitted down the cable's conductors. Skeptics should experience Vertex's simple demonstration: with one end of a cable held against a stethoscope, they invite you to listen while they scratch the other with a coin. With conventional cables the sound of the scraping is as clear as a bell. With a Vertex cable, it's silent.

Now, considering the amount of mechanical energy generated by the average low-impedance moving-coil, this should be the perfect application for the Vertex approach. ►

► Sensibly, the boxes are located at the phono-stage end of the cables, an arrangement necessitated by the risk of simply disabling a turntable's suspension by hanging large weights off its rear corner! Even so, these leads are reasonably resilient and far from ideal for the more nervous, suspended designs out there. But with the advent of ever more high-mass designs and tonearms with phono socket outputs there are plenty of situations in which they can readily be used. Certainly the TNT6/JMW combination presented no problems.



The Vertex leads aren't cheap – in the order of £800 for a meter pair – but in the context of several thousand pounds spent on a tonearm and thousands more on the 'table to mount it and the cartridge for it to carry, this certainly makes sense. I reckon that around 20% of your total vinyl replay budget should be considered for the signal leads. Yep, that means putting a £100 Incognito on a £400 turntable and cartridge combination. Just try it before you scoff...

At the other end of the spectrum, stratospheric cartridge prices will soon outrun the available cable options, but the logic is simple. If you're spending serious money on the best cartridge you can possibly afford, make sure its signal gets to travel down the best leads you can afford too.

Nordost's cable systems follow the coherent loom doctrine with a

vengeance. Normally, mixing and matching has been a major no-no, whilst each additional level of Nordostification has reaped equally major rewards. Of all the leads available from the company, Valhalla is both by far the best performer and by far the worst offender when it comes to getting along with its peers. Now I've got quite a collection of tonearm leads (it being something of a hobby-horse with me – in case you didn't realise). Yet, with the full Valhalla loom in place none of them has been as effective in the tonearm role as an adapted Valhalla interconnect (paired plugs and an earth strip grafted to a single lead) which has been my tonearm lead of choice for quite some time.

offered a wider but shallower and less layered stage, with slightly less air and dimensionality. But they also have their own trump card, a wonderful sense of musical pulse and flow. Choral voices might not have been as well separated, individuals as spookily isolated, but the choir as a whole hit its notes with an exhilarating certitude and tremendous sense of collective power. The broadest of orchestral sweeps are given a real sense of purpose, the music throbbing with an inner energy and vitality. If absolute delicacy is your thing, micro-dynamic resolution, you might do better. But if you like to be swept along by the Enigma Variations or experience the attitude that drives great roots rock then



(Nordost are in the process of developing dedicated tonearm leads across their range – just don't hold your breath!) Plugging the Vertex AQ leads in, in place of the incumbent Valhalla, isn't exactly giving it an easy time, yet for the first time here was a lead that held its own.

First impressions for once proved accurate, with the Silver Solfonns exhibiting a big, smooth but most impressive of all, a totally grain free presentation. The Nordost retained an edge in overall resolution and transparency, as well as instrumental character and texture (a Valhalla forte). In contrast the Vertex leads

you'll find the engaging emotional and musical intensity of the Solfonns, coupled to their sheer substance and an impressive dynamic range, hard to do without once heard. The sheer impact of a well-orchestrated crescendo is impressive indeed. The strengths of these cables are firmly in the realms of musical communication; what is being played as opposed to how. In a more forgiving system context I suspect the Vertex cables might well be more impressive still. They might not match Valhalla in certain, very specific regards and in an all Valhalla system at that, but I suspect that relative to many other cables, their levels of focus and resolution will be just fine, while their other strengths are considerable. It's not something I've had a chance to try as yet. ►



► Then there's always the question of a total Vertex AQ cable loom, something which proved exceptionally successful when we tried it at the Manchester show. If Vertex's excellent cables are your bag don't hesitate when it comes to the tonearm lead. If your cable manufacturer of choice

is someone else and that company doesn't offer a credible tonearm lead then I'd strongly recommend investigation of the Vertex solution, especially if its musical properties appeal. It could unlock a whole new level of communication with your record collection. ►+

Stereovox  
UK Distributor: Symmetry  
Tel. (44)(0)1727 865488  
Net. [www.symmetry-systems.co.uk](http://www.symmetry-systems.co.uk)

Vertex AQ  
Tel. (44)(0)1454 326496  
Net. [www.vertexaq.com](http://www.vertexaq.com)

# The Cadence Okki Nokki Record Cleaning Machine

by Roy Gregory

Some wag once said that designing a turntable should be easy; all it has to do is turn at the right speed and do it quietly. By that measure, a record cleaning machine should be a piece of cake. Not only is speed consistency immaterial but noise levels are all but irrelevant – unless of course you want to clean records and listen to them at the same time. Yet, despite the apparent simplicity of the proposition, successful record cleaners are few and far between, with various contenders falling by the wayside due to poor reliability or even incendiary tendencies! In fact, consistent presence in the UK market is limited to just two long standing providers – Loricraft and VPI. It's the US company that sets the pace, its HW17.5 both wetting and drying the record automatically. The various Loricrafts uses a thread-based scrubber similar to the old Monks' system which is much quieter than the VPI's full-width vacuum slot but also takes much longer to dry the record.

However, both these machines are expensive and (rightly or wrongly) most enthusiasts would rather invest

four figures worth of their hard earned cash in something other than an Acqua-Vac for their records. For this reason, it's the cheaper VPI HW16.5 that sets the benchmark for record cleaner performance. This simple machine (reviewed in Issues 1 and 11) is quick and above all simple to use, thus meeting the critical terms of the primary record cleaning directive: It doesn't matter how effective it is, if it's tedious, time-consuming or complicated, people simply won't bother with it. And there's nothing more useless than a record cleaner that nobody uses! In fact, the only stumbling block facing the 16.5 is price. At \$450, what represents a bargain in its home market is starting to look pricy by the time you bring it across the Atlantic.

Of course, in reality, a record cleaning machine will pay its way in no time at all, simply by allowing you to access the vast quantities of second-hand vinyl out there. The performance gains offered by such a system operate right at the front-end of this "front-end first" obsessed sector of the market, maintaining and enhancing the software before the

signal even departs storage to enter the system itself. But here is not the place to rehash the well-worn arguments over the value and performance benefits of such a machine. Despite the fact that even a cursory examination of the pros and cons should convince all but the most sceptical of vinyl users that a wet-cleaner is a necessity rather than a luxury, the price of the 16.5 is still considered by many a bridge too far. Why drop nearly \$500 on a record cleaner when that can go towards a new cartridge, lots of records or some shiny new cables?

Of course, back in the US, the 16.5 sells for considerably less, due to the absence of an additional margin and shipping costs. In an effort to get closer to the US price, UK importers have tended to drop the dealer margin, either to derisory levels or altogether. That helps, but the one thing you can't do is duplicate the greater disposable income and number of customers available in the US market.

Now, none of this is exactly news to those selling record cleaning machines, who are only too

painfully aware of the mechanics and attitudes that shape the market. If only – you can almost hear them thinking – I could sell the 16.5 for £250. That, unfortunately, is an economic impossibility. However, what you could do is build a machine within the EEC, thus losing the import costs across the pan-European market, which is exactly what Cadence (who used to be the Dutch VPI importer) have decided to do. Enter then the Okki Nokki record cleaning machine, a bare bones design that bears an uncanny

meaning it takes up less space. This is a "good thing"; less good is the absence of a lid to keep the platter surface clean and clear of dust. Two, front-mounted switches enable you to set the platter in motion, clock or anti-clockwise, and activate the suction pump: so far so familiar. Likewise, the front mounted tube that swings across the record to present its felt-edged vacuum slot to the wet surface.

different record thicknesses or warps (up to a point). Switch the vacuum off and the suction tube springs clear, avoiding any smearing or possible contact damage caused by heavy handedness when raising the vacuum arm. It's this simple arrangement that represents the genius of the 16.5.

Now, as I said, the Okki Nokki is far from a clone. There are after all, only so many ways you can turn a record and suck fluid from its surface. The Cadence design uses a similar swinging turret but makes it out of stainless steel. On the face of it this might be



outward resemblance to the VPI HW16.5 and does indeed sell for around the magic figure . But don't make the mistake of assuming that this is nothing more than a straightforward clone. The Okki Nokki has its own wrinkles, mainly as a result of experience with the VPI machines. Some of the thinking is good – and some of it isn't - so let's start at the beginning and see how it works.

Like its inspiration, the Okki Nokki takes the form of a truncated black cube. However, compared to the VPI, it's slightly smaller in all dimensions,

But in fact it's here that the real differences lie. VPI use a delrin turret that carries acrylic tubes. This is light in weight and sits with its base supported on a spring. The vacuum sucks the tube down onto the disc while the low mass and sprung mounting means that the system self adjusts for

considered a superior material, but it's also heavier, which is not (in my opinion) a good thing. The arm on the review sample is also quite stiff in operation, requiring firm pressure to swing it across the record and then down into contact with the surface. This again is, I feel, undesirable. Other, later samples are far lighter in operation than the one we have and this is definitely something to look out for should you purchase the Okki ▶

► Nokki. What you want is loose enough to turn easily, not so loose that it drops onto the record surface.

The platter of the Cadence cleaner is cut from thin, sheet metal and is supported by peripheral rollers placed at three points around its circumference. Did I say that noise was irrelevant when it comes to cleaning machines? Well, maybe I overstated the case. Leaving the vacuum pump aside for the moment, the Okki Nokki's motor sounds like you've put gravel in a coffee grinder. The planetary drive is certainly powerful, but the noise generated is sufficient to give palpitations to those facing the prospect of teaching teenage offspring to drive. These are definitely gears, Jim, but not as we're used to hearing them.

The other major difference you'll discover with the Okki Nokki is the absence of a waste fluid reservoir. Instead of a catch tank in the body, the vacuum pump simply drains into a long tube. This can be emptied every seven records or so simply by unstoppering its end. As I reckon that the noise levels and repetition involved in using any record cleaner make six records my, err, record for a single continuous session, this seems like a pretty sensible compromise, eliminating extra parts and keeping the waste fluid level clearly visible.

Cleaning a record consists of placing it on the platter and fixing the small, central clamp. Start it turning and squirt cleaning fluid onto the surface, spreading it evenly with the brush provided (whilst avoiding the label). Having gently scrubbed the record for a couple of revolutions, simply reverse the rotation and carry on scrubbing – but not too hard! Then swing the vacuum arm across and down into contact with the record

and switch on the vacuum pump. After a couple of revolutions the record surface will be dry. Rinse with purified water using the same process, if your cleaning fluid demands it. Raise the arm, switch off the motor and unclamp the disc. That's one side done, which should take a couple of minutes. You can use pretty much any fluid you like with the Okki Nokki but I prefer non-alcohol based solutions like the one from the Disc Doctor or Art du Son (available through Loricraft).



Whilst these both require a rinse cycle, I find them

sonically superior to alcohol based solutions and they avoid the risk of long term damage to record surfaces.

Just in case you hadn't noticed, records have two sides, so you still have to clean the other one. That means placing the newly cleaned surface on the mat which has just been supporting the dirty side. What you need to do is either flip the mat (having labelled it as to which is the clean and which the dirty surface) or have a second mat, with its clean side clearly marked. This of course applies

to all cleaning machines. Likewise, you'll need a clean inner sleeve for the now clean disc.

How does the Okki Nokki actually perform? Once you're familiar with its operation the answer is extremely well. You need to take care with the swing arm, which means that it's not quite as easy to use as the 16.5, but then how many people will ever have the two side by side. Like the VPI

machine you'll also need separate tubes for 10" and 7" discs. For me, the stiffness of the swingarm, the motor noise and the lack of a lid mean that I'd find the extra money for the 16.5, but that misses the point: I'm one of the converted. The whole *raison d'être* for the Okki Nokki is those people who won't make that level of financial commitment. For them, the Cadence machine offers a seriously welcome opportunity to enter the world of proper record care. That's got to be good news. This is a practical, robust and reliable cleaning machine that does the same job as the competition for around half the price. And you can't Nok (ouch!!) that. Let's also remember that the 16.5 has been around for a good few years. The Okki Nokki is right at the beginning of its evolution, allowing plenty of time and space for development and improvement. There again, for the moment and at this price, it's doing just fine. ►+

Price: €325/£225

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# Record Reviews

## How To Read Them
















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.

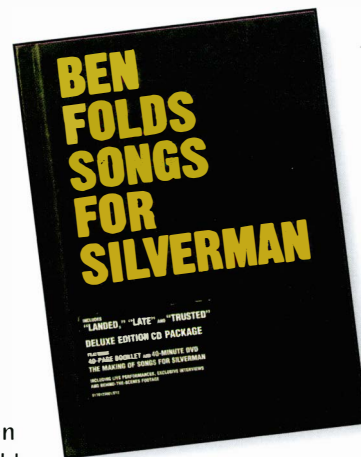
The ratings at the bottom of each review reflect the reviewer's opinion of the recording quality, and musical merits of the album. You'll soon realise that a great many musically significant albums offer less than wonderful sound. Don't let it put you off! For your information the scale rates a standard, 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, Simon Groome, Michael Mercer, Richard Clews, Sian Drinkwater.

### Key to Icons

-  CD
-  Gold CD
-  HD
-  XR
-  Double Disc
-  DVD
-  SACD
-  Hybrid SACD
-  Multi-Channel
-  120g LP
-  150g LP
-  180g LP
-  10" LP
-  Availability As S/H LP
-  Vinyl Double Album



Ben Folds

### Songs For Silverman

EPIC 517012 3 

Sometimes it seems you take your eye off the ball for just a second, and suddenly things creep up on you. I guess that's what happened with Ben Folds Five once they split.

*Songs for Silverman* is Ben Folds' second studio album since he went solo (if you don't count last year's record with William Shatner). By going solo he has escaped the pressure of recording material suitable for a band, and instead has been able to concentrate on putting down a record that contains much more subtlety. Don't get me wrong, you won't put this record on and be amazed at the change, this is still basically the same line in piano-pop as the Five produced. But gone are the forced upbeat singles. In their place are songs that drip with regret and bitterness, peppered with just enough hope and forgiveness to lighten the mix. Each song is a story, or at least the essences of the story are there, delivered with an exquisitely delicate touch. These are stories of loss (lost trust and lost youth) and of discovery, both good and bad. And each of these stories is presented in a form that is utterly perfect and carefully judged. This album will profoundly effect your emotions, if you let it. And that, as far as I am concerned, is one sign of a great record.

MC

RECORDING  
MUSIC 



## The Boxer Rebellion

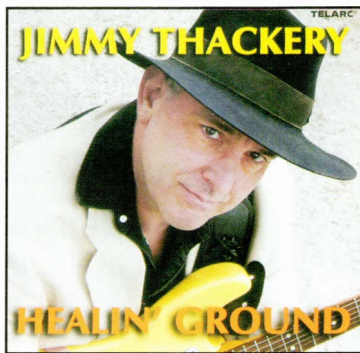
### Exits

Poptones 986979-7 

*Exits* is a surprisingly accomplished debut album from a band that have been working the live scene for a while. The Boxer Rebellion started life as an acoustic double act, but have since grown into a fully-fledged band. This has given their music an interesting form, with thoughtfully sculpted songs, sung with unbridled passion, set against very carefully considered backing. A few years back a band called Annie Christian resolutely failed to make an impression on the musical world with a very similar sound – operatic vocals over a crushing guitar line. The Boxer Rebellion, though, may yet make more headway. The danger with this kind of music of course is that it is seen as pretentious and self obsessed: a trap that Annie Christian walked straight into. But *Exits* succeeds in steering away from this and keeps the album simple and well focussed. A number of awesome tracks form the core of the album, with heavily distorted guitars and feedback complementing the darker rhythm section. Then, in the slow tracks, The Boxer Rebellion show a glimpse of their roots, with the acoustic guitars swapped for layers of electric ambience. Suffice to say, The Boxer Rebellion have something. This album may not yet be enough to catapult them to the front pages, but it's still a fantastic record. Superbly talented vocals and guitar make this an album that's definitely worth owning.

MC

RECORDING  
MUSIC



## Jimmy Thackery

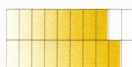
### Healin' Ground

Telarc CD83624 

I champion this guitarist every opportunity I get, as regular readers of this magazine will testify! Thackery is the consummate axeman; there isn't a better exponent of the blues working in the field today. He consistently puts out fine albums and with each release he extends his fantastic technique, always offering something fresh in an overcrowded market. The last four, particularly, have been outstanding, not just from a guitarist's viewpoint but from a songwriter's perspective too. *Healin' Ground* finds him working with two of Nashville's most respected songwriters - with spectacular results. From the offset Thackery makes his intentions known with some typically incendiary playing, fingers flailing wildly on the fretboard and sparks flying in all directions on 'Let The Guitar Do The Work'. He follows with 'Fender Bender', an instrumental workout with nods to Hank Marvin one minute and every rock guitarist you care to mention the next. Thackery's voice is gruff but perfectly suited to his sound. He makes good use of what he's got on 'Had Enough', a tough ballad where he really sounds like he can't take any more. I know I say it every time but if you haven't discovered Thackery then it's high time you did, although if you're one of those irritating purists I suggest you give him a very wide berth. The rest of us can just marvel.

AH

RECORDING  
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## Claire Hamill

### The Lost And The Lovers

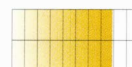
Archway Music ARCH009 

Singer, guitarist and songwriter Claire Hamill probes and pushes at the farthest outposts of the human heart in this collection of ten sweetly sung, beautifully played and constructed ballads. Here she has the writing credits for all but the McCalmont/Butler track Blue, but like the others, including: 'In The Leaves Of The Park'; 'We'll Be Glad We Cried'; 'Don't Prolong The Agony'; and that song so much loved by Eva Cassidy, 'You Take My Breath Away', have tenderness and yearning running through them. Her voice, which possesses a lightness of touch and a searching quality that is occasionally reminiscent of a youthful Joni Mitchell, bleeds into an attractively framed expression of emotional and intellectual need. Sentiments which have graced Claire's music since an early 1971 teenage debut album entitled *One House Left Standing* have over the decades developed into this sophisticated musical pursuit of the innermost workings of our often troubled psyches. The backing players, who she has many generous words for in the liner notes, sympathetically trade these insights with Claire and each other on a clean sounding recording which has surprisingly good dynamics and presence.

Supplier: [www.hotrecords.uk.com](http://www.hotrecords.uk.com)

RP

RECORDING  
MUSIC



The Who

Who's Next

Classic/Track Deluxe 2408 102



Has anyone ever recorded a better hard rock album than *Who's Next*? This is simple music to be sure, but almost every choice Pete Townshend made in constructing this work hit the centre of the target.

Like an advertising jingle genius using his powers for good, Townshend repeatedly built the songs around a direct and distinctive human message, whether it was the cold political realism of 'Won't Get Fooled Again', the cry of loneliness of the angry and violent man in 'Behind Blue Eyes', the declaration of obsessive love in 'Bargain', or the wake-up call to stoned rock and rollers in 'Baba O'Riley'. This lyric potency was wedded to equally powerful melodies and riffs, freshened by Townshend's novel, varied and effective use of synthesizers for percussive effects, counter-melodies and background colour.

To bring it home Townshend had a band of players (including himself) at the height of their individual powers. Keith Moon, John Entwistle and Roger Daltrey never deployed their respective strengths more effectively (and Entwistle gave us his funniest composition in the craven 'My Wife'). These were musicians so strong they didn't need to solo, and like other great ensembles at the height of their powers they could and did put the songs first.

As for the sonics of this new re-issue, Glyn Johns' superb recording job is done full justice. On 'Baba O'Riley', for example, the opening piano chords immediately sound right, with just the slightest touch of natural decay. The natural quality of Pete Townshend's vocal lines mid-song is startling. Drums and bass have force and presence but are not exaggerated. The lead footed and muddy sonics that plague so many rock re-issues are completely absent. Throughout the album, the resolution of fine details is rendered with precision and in perfect proportion. There are picks on the strings of those banks of acoustic guitars Townshend used for rhythm tracks.



Instruments that in other pressings might be mistaken for horns are plainly revealed as the work of a synthesizer. Even very modest touches of echo and reverb are consistently and clearly revealed throughout.

The Classic sounded so good that I delayed a comparison of it to MCA's 'Heavy Vinyl' 180g re-issue of a few years back, and to a UK original (Track Deluxe 2408 102). When I got to it there really was no contest between the Classic and the MCA. Although the MCA is certainly decent, in comparison to the Classic it is slightly veiled and a little less dynamic, with a level of tape noise suggesting a less than ideal source.

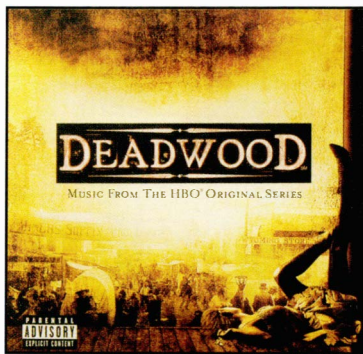
The real surprise for me was a comparison the Classic to the original UK pressing. Although the original is excellent, and slightly more dynamic than the Classic, the Classic more clearly resolved fine details while maintaining warmth that was absent from the slightly bright UK version. The Classic also fills

out the mid-bass and bottom end without loss of detail or added bloat. Keith Moon's drum kit is bigger and wider in the soundstage, and John Entwistle's bass has more presence. Although the original's high reputation for sonics is well deserved, the Classic is certainly in the same league. In my experience this is a special accomplishment for a re-issue. It should be noted that the Classic was mastered by Chris Bellman, a name I will be looking out for on future re-issues. Unfortunately, the Classic pressing does not quite maintain the standard established by the analog remastering – on my copy there is a very low level of steady state noise apparent in quiet passages from time to time. If not for that the sonics would merit the highest score.

PD


RECORDING  
MUSIC





## Deadwood

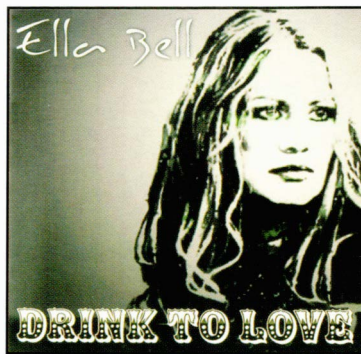
### Music from the HBO Original Series

Lost Highway B0004012-01  

A gritty, uncompromising and darkly humorous television series depicting the brutal underbelly of the old West pulls very few punches in its representation of legendary characters like Wild Bill Hickok or Calamity Jane (she is certainly no Doris Day). These dialogue excerpts (harsh and quite often offensive) intersperse a mixture of artfully chosen and evocative country blues tunes from the likes of Lyle Lovett 'Old Friend', Bukka White 'High Fever Blues', Mississippi John Hurt 'Farther Along', the Seeger Family 'Snake Baked A Hoecake' or Sonny Terry & Brownie McGhee's 'God And Man'. Some will be familiar others less so. However, these and the less well known but wryly-observed Michael Hurley ditty 'Hog Of The Forsaken' and a quizzical Julie Carter Cash track, 'Will The Circle Be Unbroken', make for a truly gripping recreation of that hard broiled and saddle sore world. They are songs that have been pared back to little more than fiddle, vocals and guitar for a display of raw musical simplicity that really gets beneath your skin. Those short and pithy snippets of dialogue actually manage to enhance rather than detract from a powerful sense of verisimilitude created here. While an unexpectedly fine, atmospheric and natural sounding recording from this mainstream label puts a bit a polish on all that bar room spit.

Supplier: [www.vivante.co.uk](http://www.vivante.co.uk)

RP



## Ella Bell

### Drink To Love

Luna Records EllaCD0001L 


The music scene is just awash with female singers at the moment, and here's another for you to get your (musical) teeth into. The charmingly named Ella Bell is the youngest of six children born to musical and unconventional parents, who in Ella's words were "hippie/gypsy types and the only folk I knew who weren't up to their eyeballs in hire-purchase furniture. If I wanted to be white, they wanted to be neon pink." As a teenager Ella's musical education was formed by the likes of Siouxsie, The Cure, Talking Heads and Pink Floyd, but this album probably falls more into Sarah McLachlan / Jann Arden territory, although there are traces of Pink Floyd's quieter moments along with a dreamy, almost Enya-esque quality to some of the songs. A dark and eerie richness surfaces occasionally, as it does on 'Come On A Journey' with its pulsing bass lines and almost regimented drumming, whereas others, like the subliminal 'Drink To Love', cut right through to the very soul and show a tender and ethereal side to her writing, which at all times maintains the very highest standards. *Drink To Love* won't be available in record stores, but at Beanscene (an expanding coffee and music house chain) and off the label's website, which is [www.lunarecords.co.uk](http://www.lunarecords.co.uk). It's a brave move, I hope they know what they're doing. And I hope you like coffee.

AH



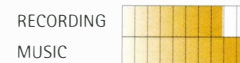
## June Carter Cash

### Press On

Dualtone 80302-01130-2 

The Carter-Cash dynasty permeates every aspect of this album with that wonderful clarity found in a crisp and sunny Appalachian mountain day. June's voice reflects that marvellously rugged, clean and airy quality as she seamlessly switches between deeply touching or sorrowful songs like 'The Far Side Banks Of Jordan' (with Johnny Cash) on the one hand and those witty often outrageously funny observations in 'Gatsby's Restaurant' on the other. Her superb auto-harp playing, the acoustic simplicity, fine musicianship from Rodney Crowell, Bob Johnson, Norman Blake and Marty Stuart and those underlying themes of family and faith adds to that acute sense of integrity and dignity running throughout *Press On*. There's also a compelling version of 'Ring Of Fire', where June's auto-harp is joined by Blake's guitar and Jason Carter on fiddle, which should with its delicacy make you completely reappraise this classic country anthem. When you couple this to June's lovely solo rendition of a Carter family standard like 'Will The Circle Be Unbroken' then you know that there is an undisguised feeling of continuity – a musical pedigree which stretches right through from the opening A.P. Carter 'Diamonds In The Rough' to this closing Mother Maybelle Carter farewell.

RP





Holly Golightly

Slowly But Surely

Damaged Goods DAMGOOD 232-LP

Holly's self-consciously retro appeal frequently borders on pastiche and in these flexible rhythmic excursions that recall a variety of female vocal styles from those late Fifties salon numbers to an early Sixties groove she weaves a dance like pattern much in keeping with the cover artwork seen here. Nine of the dozen songs are Golightly originals, the others carefully chosen covers. Often her singing for songs such as 'On The Fire' is double or even treble tracked to recreate a sense of girl group harmonies. Sometimes these sugary layers are a little too sticky. The difference though is in the application of a cutting lyrical edge. Lines like "Your love is a lie and you love a liar" to the closing words of 'Dear John' "As it falls from my hand I never felt less" resonate and rip aside the warmth of a soft focus vocal glow. Moving away from these frustratingly tiny voiced threads to a passable imitation of Peggy Lee in the tender Billy Myles song 'My Love Is', Miss Golightly goes on to prove that she has genuine credentials and could perhaps be a diva in her own right. Stitch together bottleneck, rhythm guitar, sitar and six string bass lines and you get an attractive instrumental backdrop to proceedings.

RP



Kasey Chambers

Wayward Angel

Virgin Records CDVIR218

When in Perth in 2000 I was hearing a lot about a certain young lady called Kasey Chambers, her debut album *The Captain* was everywhere and difficult to miss. I bought it and was amazed at the earthiness of the song-writing and her vocal style, a sort of countrified Rickie Lee Jones – just as quirky but instantly accessible. The follow up, 2001's *Barricades and Brickwalls*, was another strong set and gained her a foothold in the lucrative US market, prompting influential magazine Rolling Stone to proclaim her "the freshest young voice in American music", not bad for a nomadic hippie from the Australian outback! Fast forward to 2005's *Wayward Angel*, 14 mainly self-penned songs and definitely her finest to date. Chambers has garnered praise from fellow professionals like Lucinda Williams, Steve Earle and Emmylou Harris and it's to artists like these to which she tilts her cap. She can be introspective ('More Than Ordinary'), rootsy ('Wayward Angel'), biographical ('Paper Aeroplane') or just plain kick-ass and greasy ('Guilty as Sin'), but wherever the music takes her the girl always handles it with oodles of class. Chambers keeps *Wayward Angel* a family affair with father Bill on lap-steel guitar and brother Nash in the producer's chair. Also in tow is renowned session guitarist Stuart Smith who lays down plenty of his trademark fluid work.

AH



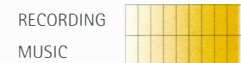
Mary Gauthier

Mercy Now

Lost Highway 602498641682

The last three albums from this supreme poetess have been of the highest standard, but with *Mercy Now* she's really moved up a gear. This is Gauthier's *Car Wheels On A Gravel Road*, her defining moment in what has been a long, hard journey of self discovery. If anyone has the right to sing about the darker side of life then it's Mary Gauthier. An alcoholic father, a cancer suffering mother, constant drinking and drug taking, jail and detox houses – you name it and Gauthier's life has been touched by it. Eventually she came out the other side, stronger for the experiences and focussed on getting her life back. She opened a Cajun restaurant (a major success), picked up a guitar and started writing and performing her songs in local coffeehouses. Gauthier's ability to paint vivid pictures with words is her greatest strength. 'Falling Out Of Love', the album's opener, conjures up some of the most heartrending images ever committed to tape: "falling out of love is a dangerous thing, with it's crucible kiss and its ravaged ring..." she sings, without a trace of self pity. Show me another singer who has the ability to make a broken relationship so damned beautiful. Pure genius from start to finish.

AH







Jessi Alexander

Honeysuckle Sweet

Columbia 5198962

One glance at the musicians Jessi Alexander lists as an influence should be enough to convince the listener that this isn't just another talentless bimbo thrust into the limelight by the merciless Nashville money-men. Jackson Browne, Bonnie Raitt, Tom Petty, Emmylou Harris, The Band...., just a few of the names Jessi fondly remembers listening to as a young girl growing up at her father's house in Memphis. She clearly listened well because elements of the above artists abound on *Honeysuckle Sweet*, her debut album for Columbia. Alexander also knows how important surrounding yourself with the right musicians can be; she's enlisted the likes of The Jayhawks' Gary Louris, Benmont Tench of the Heartbreakers and Dan Dugmore, veteran of all those classic Ronstadt albums, to help her create the mood. Although Jessi doesn't have Ronstadt's power, those early albums can be cited as a reference point, along with Trisha Yearwood on the beautiful 'This World Is Crazy'. Jessi spent her formative songwriting years producing work for other artists and stepping out of the shadows can be a daunting task – just ask Matraca Berg. Alexander has a good chance of cracking a notoriously fickle market though; she has great songs, a voice on the right side of rootsy, a top notch band and she's beautiful – not a necessity, but helpful in this shallow world we inhabit.

AH



Night Train To Nashville

Music City Rhythm & Blues  
1945-1970

Lost Highway B0002100-01

Lost Highway's growing contribution to the recorded arts continues with this musically significant and sonically irrelevant collection charting the impact of the Nashville R&B movement. It criss-crosses between soul, blues and gospel to embrace jive and boogie-woogie rhythms on a journey that encompasses music by the famous in Etta James and Johnny Adams to those intriguingly obscure cuts like the countrified blues of Arthur Gunter on 'Baby Let's Play House' and the Tennessee State Penitentiary tenor singing of the Prisonaires for Johnny Bragg's melancholy ballad 'Just Walkin' in the Rain'. In some instances the proximity to bluegrass and country blues style is blindingly obvious – on other occasions there are only the barest of rural threads clothing these diverse performances that have spanned the decades and influenced so many musicians from all genres. This is an album that should lead to a healthy exploration of the soulful Southern tones of Roscoe Shelton, the deeply held sadness of Christine Kittrell or the keyboard genius of Esquerita. The generous and informative inner sleeve notes for all thirty-five tracks also encouragingly charts this rich seam in the black musical heritage.

Supplier: [www.vivante.co.uk](http://www.vivante.co.uk)

RP



David Midgeon

Little Stranger

Dekkor Records DRCD001

Back in the good old retail days, MCA were hell-bent on breaking a band called The Blessing. They moved heaven and earth to get them up the charts with the single 'Highway 5', but like so many others they slipped off the radar. I only mention this because David Midgeon's voice bears a remarkable resemblance to William Topley, The Blessing's lead singer. It's deeply resonant and filled with a lonely ache, and the songs contain a maturity rarely found in one so young. Midgeon hails from a musical family, and although classically trained on the French horn he moved over to the piano when his father bought him one for his 21st birthday. It was then that his passion for song-writing took a hold and he immersed himself fully, basing his style around musical heavyweights like Nick Cave, Randy Newman, Tom Waits and Neil Young. Those names will give you an idea of what he sounds like, albeit in much more of a jazz/blues vein. He understands how to wrap a song around a strong melody, as he does beautifully on 'Pennies' with its cascading piano hook and lilting summer vocal. Midgeon, along with Amos Lee, are at the forefront of a new breed of singer/songwriter, ones with huge crossover appeal who could do for the chaps what Norah Jones has done for the ladies.

AH





Silver Sun

Disappear Here

Invisible Hands Music lhcd35

I have had to wait nearly seven years for this album. In 1998 Silver Sun released *Neo Wave*, an album that was met with universal disappointment. And although it gave Silver Sun their biggest chart hits to date, they slid silently away into obscurity. Then suddenly, last year, their website sprung into life, and Silver Sun burst back onto the live scene. So, seven years away from the spotlight, how have Silver Sun changed? In three words: not at all. In fact *Disappear Here* does something even more exciting than developing the band's iconic sound: it retreats back to their original formula, delivering a sustained blast of classic Silver Sun. The album opens with their comeback single, 'Bubblegum', which does exactly what it says on the tin: a dose of sugar coated guitar pop to rival any of their old singles. Then, through a ten-track album, they demonstrate that they can provide classic retro melodic pop as well. Blending influences ranging from Gary Glitter to the Beach Boys, they mesh close harmony with fuzzed up guitars and create music from a different age. It's a telling fact that you could pick any track off this record for a single. Like a child force-fed sugar before break-time, this album jumps and jerks with a furious energy – guaranteed to put a smile on your face.

MC



Teenage Fanclub

Man-Made

Pema PEMA002

Teenage Fanclub have what is commonly described as an "established" fan-base. Indeed, most of their fans are now so deeply established, they no longer need to book a babysitter for their children, but then, after all, the band themselves are no spring chickens. However, unlike many bands they could easily be compared to, Teenage Fanclub still exist on the fringe of popular music, inhabiting the world of independent record labels and small-scale releases. Unlike bands such as the Flaming Lips, Teenage Fanclub have yet to headline festivals and climb onto mega-stages. This total lack of any dizzying rise to global stardom has had a profound effect on their music – it has remained almost unchanged. Teenage Fanclub have resolutely refused to re-invent themselves. No "difficult third album" here. Their music may have shown a slow slide into easy middle-paced tunes but as track after track shuffles past you can feel your cares drop away. That's not to say they don't still like to turn things up a bit, but in general *Man Made* is an album to relax to. Perhaps you might be inclined to read all this as something less than a glowing recommendation, you couldn't be further from the truth. Younger, more aggressively ambitious bands, could never produce an album that is as self-assured as this, confident to be just what it is. *Man Made* is beautiful, just as it is.

MC



Tift Merritt

Tambourine

Lost Highway B0002528-01

*Tambourine* is a varied album, assured but in search of an identity. It has a feeling of "work in progress" about it. However, without doubt Tift Merritt is a versatile and exceptionally talented performer. Qualities that are borne out in the level of ambition shown in the opening three tracks – songs where she comfortably dons country rags to reminisce and then beat herself up over a man in 'Stray Paper'; picks a rocking tempo for 'Wait It Out' and, believe it or not, gives a more than passable imitation of a big hearted soul singer with 'Good Hearted Man' and again later on in 'Plainest Thing'. Soul may yet prove to be her strongest card. The passion, drive and enthusiasm for song craft are present for all to hear. It extends way beyond the displays of vocal dexterity to embrace some fine piano playing and solid song writing. Merritt is not quite the finished article, nor does she possess the most powerful voice or richest of tones but her carefully written / chosen music does maximise a sweet, clean and precise singing style. The strongly sympathetic instrumental work and those Gary Louris and Maria Mckee harmonies reinforce a refreshing approach by an unencumbered and evolving talent.

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RP



# The Case For Originality...

## The MoFi John Lennon Re-issues

by Peter Downard

Over the last 30-plus years, the 'Original Master Recording' brand of Mobile Fidelity Sound Lab ("MoFi") has rightfully acquired a special goodwill among listeners seeking the best analog presentation of classic rock performances. In addition to superior sonics, a key component of that 'Original Master Recording' goodwill has always been the promise of authenticity. Maximum proximity to the original master tape holds out the prospect of bringing the listener closest to the music as envisioned and realized by the artist.

Which is why MoFi's recent re-issue series of early John Lennon solo albums have to be regarded as 'Original Master Recordings' with an asterisk. These records are based on new masters digitally remixed several years ago under the supervision of Yoko Ono, not the masters John Lennon approved for original release. MoFi has made no secret of this, but do these new re-issues meet the standards of MoFi's best work?

### John Lennon/Plastic Ono Band

Capitol/Mobile Fidelity Sound Labs MFSL 1-280 **180g** **4**

*John Lennon/Plastic Ono Band* ("JL/POB") has often been referred to as Lennon's 'primal scream album', a reference to a particular course of psychotherapy he briefly engaged in after the breakup of The Beatles. The tag is fair enough at moments, but it falls far short of accurately capturing the spirit of the album as a whole.

When Lennon recorded this first set of solo song performances he had just been spat out of one of the biggest fame machines of the 20th Century. He was well chewed up. It probably didn't help that during the past

five years he had come dangerously close to becoming an acid casualty, used heroin, lost a marriage, and had come to be widely harassed by main-stream media for dabbling in politics and taking up with That Strange Japanese Woman. JL/POB is a document of this sensitive, intelligent and damaged artist trying to get a handle on the fundamentals of life and redefine himself. The 'primal scream' tag derives most famously from the opening

'Mother'. Ending with anguished howls, the song expresses the pain of the young Lennon whose father abandoned the family and whose mother in turn left him to be raised by a relative. Yet these songs are about much more than anguish. They are just as commonly about the feeling and challenges of love ('Look At Me', 'Love'), the rejection of propaganda and power structures ('I Found Out', 'Working Class Hero'), and keeping a straight enough head to get through it all ('Hold On'). The penultimate 'God' is a profoundly sane and clear-eyed repudiation of idols and fame that seeks to make peace with Lennon's audience as he attempts to reinvent himself on his own terms.

The album coheres as a unified whole by



▶ presenting Lennon's search for human fundamentals in songs based on simple folk, blues and soul forms. These are augmented with the occasional Beatles elements – the finger-picked acoustic guitar of 'Here I Am' mirrors 'Julia' from the White Album, and the electric guitar line on 'Hold On' is a variant of Abbey Road's 'Sun King'. The production, by Lennon and Phil Spector at Abbey Road, is also minimal. Instrumentation generally consists of Lennon either alone or with a simple rhythm section of Klaus Voormann on bass and Ringo Starr on drums. Still, the adventurous spirit of The Beatles' recordings appears in the form of subtle and effective sonic tampering. The bell tolling so ominously at the album's opening has been made more effective by slowing down the original tape. 'Working Class Hero' makes a second grab for the listener's interest by jumping from one vocal take to another in mid-track, and Lennon does not hesitate to use reverb, echo and double-tracking to enhance his superb vocal performance where it will do the most good.



Unfortunately, the new MoFi re-issue of this great album is a letdown when compared to some of MoFi's best work. The sound is decent enough but is on the whole flat and lifeless. Strangely, the remix often seems to relocate Lennon's brilliant vocal performance in the back of the soundstage, while unnecessarily boosting the bass and muddying the interaction of the rhythm section. Although someone coming to *JL/POB* for the first time in this presentation should still be able to appreciate its magic, there is no meaningful comparison between the new MoFi and a Seventies UK pressing (Apple PCS 7124). On the latter the soundstage opens wide, Lennon's voice is more prominently and precisely depicted, and there is more clearly defined space among the instruments.



## Imagine

Capitol/Mobile Fidelity Sound Labs MFSL 1-277 180g 7

It may be that Lennon, slightly disappointed by the modest sales of *JL/POB* and the comparative solo successes of George Harrison and Paul McCartney, decided to rise to their commercial challenge. In any event, on *Imagine* Lennon applied his new self to his former occupation of producing pop masterpieces. He succeeded - brilliantly.

Coming to the sessions with an ace up his sleeve in the title single, Lennon also cleaned out his Beatles songwriter closet – 'Jealous Guy' is a rewrite of 'Child

of Nature', originally written in India for *The White Album*, 'Gimme Some Truth' was tried out during the *Let It Be* sessions, and there are tapes of Lennon essaying 'Oh Yoko' during his 1969 Bed-In for Peace demonstrations. On *Imagine* Lennon also deployed members of the same rock royalty that Harrison had called upon so successfully on *All Things Must Pass*, including superb keyboard artists Nicky Hopkins and John Barham, drummers Jim Keltner and Jim Gordon, and Harrison himself, who delivers some

of his best solo playing on record here.

On most of *Imagine's* numbers Lennon made a point of turning his focus from the specifically personal of *JL/POB* to the universal. Although his fundamental concerns continued to be love, political power and personal sanity, the superb ballads 'Imagine', 'Jealous Guy' and 'Oh My Love', and equally the barrelhouse rocker 'Crippled Inside' and the crunching 'Gimme Some Truth', are as much about every one of us as about John & Yoko. It is not until the second half of side two that Lennon's musical auto-biography continues with 'How Do You Sleep?', his notorious rant at Paul McCartney, and the concluding, rollicking joy of 'Oh Yoko!'.

At first listen, the sonics of the MoFi *Imagine* fare better than those of the MoFi *JL/POB*. As in the case of the earlier album, the soundstage is fairly small and dynamics limited, but the more elaborate

► instrumentation still packs a punch where it should. The MoFi gets the music and Lennon's superb vocals across, and effectively presents key elements such as Harrison's guitar and the sax of soul legend King Curtis.

Unfortunately, there is again no contest when the MoFi is compared to a Seventies UK pressing (Apple PAS 10004). The UK Apple is as good as the MoFi in all of these respects but much better in others. The soundstage opens like a blooming rose, with greatly increased air between the musical components and a refinement of detail and ambience. As in the case of JL/POB, the simplest arrangements most clearly reveal the superiority of the UK pressing. On the ballad 'Oh My Love' the key components of guitar and finger cymbals acquire much greater body and detail on the UK pressing than on the MoFi. No contest.



## Mind Games

Capitol/Mobile Fidelity Sound Labs MFSL 1-

*Mind Games* seems the work of a happier man, returning to his favourite subjects of love and power but with less anger and a lighter touch. The colours in Lennon's palette are a little duller and the body of his materials a little thinner this time around, but these are good, well-performed Lennon songs that admirers will benefit from revisiting.

The album has the feel of a seasoned journeyman returning to his Top of the Pops craft. The sequencing of side one's first three tracks (the single 'Mind Games', the barrelhouse 'TightA\$' and the ballad 'Aisumasen (I'm Sorry)') clearly attempts to use three of the record's strongest songs to replicate the stylistic mix and impact of *Imagine*'s three opening tracks. Perhaps reflecting Lennon's fondness for singles as well as a commercial strategy, the album frontloads its best songs onto side one. The musicians throughout are New York City session pros. Unfortunately, these folks can't hold a candle to the ad hoc ensembles on either JL/POB or *Imagine*. Guitarist David Spinozza delivers an outstanding solo on 'Aisumasen (I'm Sorry)', but such instrumental moments are few and far between.

Once again a comparison between the MoFi and a Seventies UK pressing (Apple PCS 7165) reveals clear differences. The UK pressing's soundstage is clearly deeper and wider, with a greater sense of space among the instruments and voices, and more precise detail.

But the UK is also thin, with a slightly harsh treble, and little bass. Although the MoFi has the same modest soundstage as the company's other Lennon reissues, the MoFi is comparatively well balanced and coherent, and presents an improvement on the early UK pressing.



## Recommendation to Shoppers

Unfortunately, as a result of MoFi using digitally remixed masters of recent vintage, the MoFi *John Lennon/Plastic Ono Band* and *Imagine*, although decent, do not meet the standard set by the company's best past releases. They also do not stand comparison with Seventies UK pressings, which are still reasonably affordable and available.

There are three comforts though. First, the remix issue aside, the relatively minor *Mind Games* is a sonic improvement on the original. It is the best issue you are ever likely to hear. Second, there is no reason to think that MoFi won't relive past glories in continuing their revived analog program. The difficulty arising from the source material here is a matter that was presumably beyond MoFi's control. Third, the commitment MoFi has made to the Lennon albums might possibly play a part in someone, somewhere, making available to MoFi the original analog tapes of certain other work by the artist.



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## Tango

Laurindo Almeida & Charlie Byrd

Groove Note GRV1021-3 

Byrd, by the time of this 1985 session, had long ago carved himself a permanent niche in jazz history as a prime interpreter (along with Getz), of samba in the jazz idiom. A very talented guitarist but no match for true jazz greats like Pass, he had been very much the right man in the right place. Conversely, Almeida a Brazilian guitarist had based his career on both traditional Brazilian music, more authentically aligning it with jazz in delivering what was arguably the first authentic fusion of the two forms in 1953's *Brazilliance, Vol 1*.

Here the two merge forces, along with understated accompaniment from Joe Byrd (bass), and Chuck Redd (drums) to take on the tango, a musical form (easily ridiculed I know), but already 40 years old by the time it first reached the States. The quality of playing here quickly dispels humorous connotations, the guitarist's styles setting each other off superbly, Almeida's classical flavour working well against Byrd's blues and jazz influences. Just listen to the quite superb interplay in 'The Moon Was Yellow'. Even truly cheesy fare such as 'Hernando's Hideaway' takes on a new life here. So, is it jazz? Nope, it's just a fine interpretation of tango superbly played and very well recorded that if you don't take it too seriously is set to deliver years of listening pleasure. Recommended.

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DD



## Sonny Rollins and Coleman Hawkins

Sonny Meets Hawk!

Classic Records/RCA LSP-2712 

Neither musician really needs an introduction. They are both giants of jazz sax, Rollins's at the time of this recording already known as the boss of modern tenor, and Hawkins as the father of jazz sax playing. This album marks their first collaboration. Of course each individual's greatness in no guarantee of a result when they play together but fortunately any such concerns are immediately banished on hearing the first few notes of this set. Each musician has retained their own (highly) distinctive character whilst demonstrating a deep sympathy for and understanding of the other's playing. That they do this without compromise, neither musician playing safe, is doubly remarkable. The album is jam-packed with strong tracks from the fast-paced opener 'Yesterdays' through the more lyrical extended workout 'All The Things You Are'. It's a uniformly powerful set, but if I had to pick a favourite I'd go for the (almost) nine minute take on 'Lover Man', the first chorus divided into eight-bar sections with Hawkins opening then trading evenly between the two, Hawkins gentler tone superbly offsetting Rollins harder edged attack. It finally closes with a superb finish from the pair, Rollins at the very top of his register, and Hawkins subtly carrying the melody beneath him. For once, this 200g issue eclipses the (very fine) earlier 180g release, sounding even more full-bodied, dynamic and just plain engaging.

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## Machito

Kenya – Afro Cuban Jazz

Pure Pleasure/ Roulette SR-52006 

The original innovator in blending Latin music with jazz, Machito arrived in New York in 1937 and by 1940 had formed his own band. From this would emerge Tito Puente to carry the torch to later generations, but Machito's music also formed a major influence on the likes of Stan Kenton and Dizzy Gillespie. Names as big as Cannonball Adderley, Charlie Parker and Herbie Mann also played or recorded with Machito at various times. This album is possibly his very best with a big band featuring the likes of Joe Newman, Doc Cheatham and Cannonball Adderley.

Unsurprisingly the set is percussion and brass driven most numbers being taken at a frenetic pace although 'Cannonology' written by A.K. Salim specifically to showcase Cannonball's sax gives him free reign to express himself which he does with élan, adding welcome warmth to proceedings along the way. The strongest track here and ironically the only number not written specifically for the album is 'Tin Tin Dao' which was composed by Chano Pozo for Dizzy Gillespie. This features some fine trumpet work from Doc Cheatham.

The recording is dynamic and punchy if a little strident and lacking in weight. This however is easily offset by the power of the music making this a ground breaking and enjoyable album.

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Rosa Passos and Ron Carter

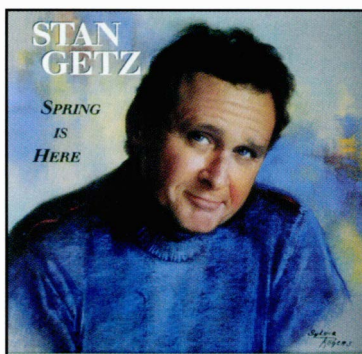
Entre Amigos

Chesky SACD291 

With a track record that includes playing bass for Miles Davis, Wes Montgomery, Cannonball Adderley, Sonny Rollins, Eric Dolphy and Herbie Hancock, Ron Carter hardly needs any introduction. Rosa Passos, whilst a little less well known, does have a fine voice well suited to this collection of Brazilian music. A fine job they make of it too, Carter's bass playing is sensitive and melodic (a listen to his short solo in 'Insensatez' is enough to convince you that the years have robbed none of his powers), the band's tight and Rosa's vocals just right. It almost goes without saying that this is another very good recording from Chesky, displaying a very natural warmth and presence. The only thing that troubles me about the enterprise is that here is yet another bossa nova album from an audiophile label. And whilst this is a very good example of its type, I am beginning to wonder how much more bossa nova the market can stand? Don't misunderstand me, I love the music and have many of the 'originals'. The problem is that I also have an increasing pile of re-interpretations which, lovely as they individually are, with the exception of sound quality, rarely step above the musical quality of those originals. This is amongst the best of the modern breed, but please, no more bossa unless it brings something genuinely new and exciting to the mix.

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Stan Getz

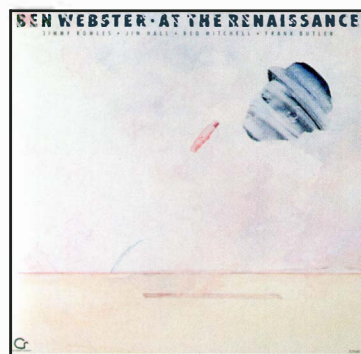
Spring Is Here

Groove Note GRV1020-3 

This is the sister album to Getz' acclaimed live set *The Dolphin* and was recorded in May 1981 at Keystone Corner, San Francisco. It is also the equal of that famous album and Getz is joined here by the same band. The opening number 'How About You' has it all – great playing from Getz, a fine bass solo, driving percussion and outstanding piano. The band are clearly on splendid form and it shows throughout the set, whether in delicate numbers like a gorgeous take on 'You're Blasé' with Getz's tenor at it's breathy best, wringing every last drop of emotion from the tune, or in faster paced pieces like the opening tune. Standouts include a delicate reading of Kern and Mercer's 'I'm Old Fashioned' featuring a languid and very lengthy introduction from Levy, and the title track which closes the set, leaving you wanting more. Getz is in expansive mode throughout, the shortest number here clocks in at over five minutes, and this brings the best from him as he delivers his lengthy, well-argued and very expressive solos. The sound quality whilst not up there with the very best (the bass is a little ill-defined and soft), is good, warm and spacious with a real sense of the venue and it requires very little effort to place yourself in a prime seat amongst the audience for this outstanding session.

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DD



Ben Webster

At The Renaissance

Analogue Productions/Contemporary S7646 

Of course this live album has already been well served by Analogue Productions in their original 180g pressing. My copy of this still sounds mighty fine so naturally it provided the perfect opportunity to determine whether the luxury double 45rpm version justified the significant additional expense. Taking my favourite number of the set, 'Georgia On My Mind', the original album serves Mitchell's opening percussion work well, and Webster's characteristically breathy entry sounds entirely natural and expressive. This is such an enjoyable number that it was a real wrench to lift the stylus at the end of this track rather than continuing through the whole set. Moving to the 45rpm version immediately blew away any regrets. It was a revelation. The cymbal work that opens the number is less bright and several degrees more real, the drums are even more dynamic, the piano more full bodied. The bass – not best presented in the original recording – is much clearer in the mix with more weight. Staging has gained both in height and depth and Webster is even more tangibly live, every nuance of his playing clearly conveyed. With the exception of the inherent flaws in the master tape principally in the track 'Stardust' that Analogue Productions correctly point out, this is a near flawless re-creation of an excellent live set. Worth the extra money? No question!

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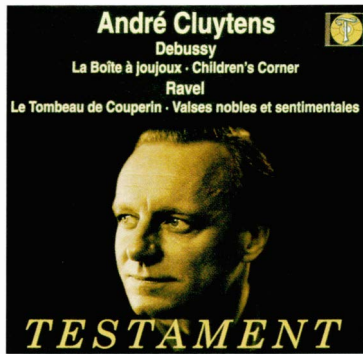


**Blues Jam at Chess**  
Featuring Fleetwood Mac, Otis Spann, Willie Dixon, Shakey Horton, J.T. Brown, Guitar Buddy, Honey Boy Edwards and S. P. Leary.

Pure Pleasure Records / Blue Horizon 7-66227 180g

At the time of this recording, January 1969, this two record set reads like a who's who of electric blues. The legendary Blue Horizon 'Blues' records have always had a large cult following. Unfortunately the U. S. issues have never been known for outstanding sonics when compared to their U.K. counterparts. Even then, and the Johnny Shines is an example for me personally, there was always something missing. Well there is nothing missing anymore. This two record set is an outstanding bargain for those interested in some great music, great playing and just a 'you are there' jam session. Fleetwood Mac's Peter Green does a bang up job on a variety of tunes and when he's not singing, one of the other greats mentioned above is wailing. I'd once heard this set at a friend's house and kind of walked away with a ho-hum feeling. Ray Staff has done a great job of remastering these sessions and Pallas in Germany has provided us with their excellent 180 gram product. The records are a treat and I'm delighted to have them in my collection. For those interested in the collectible marketplace, if you could find clean U.K. copies, even if they don't sound as good as these, be prepared to part with over £100. Highly recommended.

RSF



**André Cluytens**  
Debussy  
La Boite à Jououx · Children's Corner  
Ravel  
Le Tombeau de Couperin · Valses nobles et sentimentales

**TESTAMENT**

Testament SBT 1236 CD 1

Andre Cluytens was one of the great conductors of the French classical repertoire and his performances from the mid 1950s forged on the back of a long association with these Orchestre National de la Radiodiffusion Francaise players must rank alongside those of Monteux, Ansermet and Paray. Interestingly all the pieces here were originally written for piano, but it is in these orchestrated forms that more of the musical depth and sophistication is heard. Cluytens regards them with an intuitive and penetrating gaze. The approach to both Debussy works which explore childhood in some depth provides many telling insights as this beautiful music overflowing with piquant flavours and pastel colours vibrantly teases out an imaginative, sometimes carefree and innocent world with subtle wit and affection. In *Le Tombeau de Couperin* which was written as a tribute for those killed in the First World War he displays true understanding in a sensitive handling of this thematic material that extends to the exploration of the emotional void that was left behind after the conflict was over. The closing *Valses Nobles*, which was also recorded in mono, has characteristically engaging and radiant textures as well.

Supplier: [www.vivante.co.uk](http://www.vivante.co.uk)

RP



**Gershwin**  
An American in Paris, Catfish Row, Promenade, Rhapsody in Blue, Cuban Overture.

SLSO, Slatkin. Jeffrey Siegel, pno

Mobile Fidelity UPSACD 4007- Surround Series SACD

MOFI has given us a fabulous re-issue filled with a wealth of solid Gershwin performances by Slatkin and his St. Louis Symphony with wonderful piano accompaniment by Jeffrey Siegel. Originally released in the mid 1970's, by Vox, for whatever reason - and definitely not because of the performance - this VOX BOX became difficult to find. I've had my set (the stereo, not the quad) for many years and I've enjoyed it immensely. In a conversation with MOFI's Coleman Brice, he indicated that the strategy with their 'Surround Series' is to very subtly add 'ambient' information to the rear-channels, not to play ping-pong games. It's an approach we should all commend. There are some great sonic effects used by Slatkin in the *Catfish Row* suite that I shan't spoil for you, other than to let you know you're in for a treat. This is really first-class music making and the remastering is absolutely top drawer. The SACD and CD layers of this release are truly spectacular offering the music lover and audiophile that rare combination of first class sound with an A-1 performance. This is the type of release I am hoping to see more of from MOFI. If you are remotely interested in the music of George Gershwin, you must have this release. Highest recommendation.

RSF



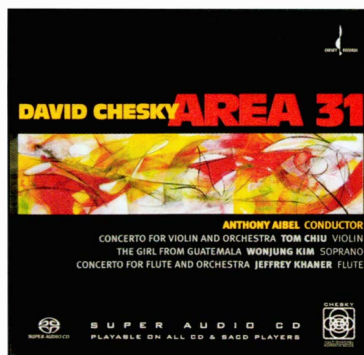


**Last Night's Dream**  
 Johnny Shines with Walter "Shakey" Horton (harmonica), Willie Dixon (bass), Clifton James (drums) and Otis Spann (piano on "Pipeline Blues")

Pure Pleasure Records / Blue Horizon 7-63212 **180g**

Here's another case of one of the greatest Delta bluesmen ever, Johnny Shines, almost getting the treatment he justly deserved when this record was first released. When I heard the original release, I hunted high and low to find a copy. There wasn't a soft track on the album. I'm a huge fan of Shines and when I finally succeeded in obtaining my copy I somehow felt I'd gotten caught up in the moment. I didn't bother to obtain a U.S. pressing as I knew the U.K. issue would be better... but maybe that's my own bias showing through. The record was just not as exciting as I remembered and actually just a few months ago, after another listening session, I decided to sell it. Well lo and behold, here comes Pure Pleasure Records and what do they release? And it's a honey. I've listened and enjoyed this album just the way I first remembered it to be. Another excellent job and I'm beginning to get a little soppo! Here's a hint: These records can be enjoyed in either mono or stereo and I wouldn't be surprised if you go the mono route. Great music, great sound. What's left? Top recommendation.

RSF



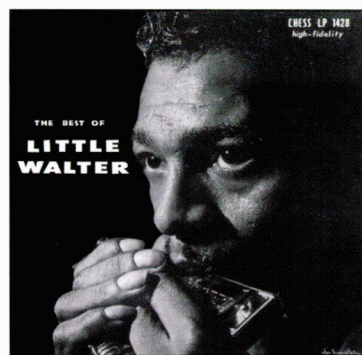
**David Chesky –**  
 Violin & Flute Concertos,  
 The Girl from Guatemala,  
 Area 31

Chesky Records SACD 288 **SACD**

David Chesky is a well-respected jazz composer, pianist and record producer. Naturally enough this foray into the realm of classical music, whilst largely founded upon the European concerto form, does employ extensive jazz figurations and Latin or South American rhythmic undercurrents much favoured by modernist American composers. This stylistic collision is not always a comfortable one. The violin part (Tom Chiu) is cleverly written to give many passionate and romantic threads from which the counterpoint darker moods and urban themes are woven. However, sometimes Chesky's overwritten percussive scoring undermines it all as he strives hard for a dazzlingly and energetic metropolitan feeling. Too fragmented is my verdict, although I understand the deconstructionist ideas he has put forward here. *The Flute Concerto* finds soloist Jeffrey Khaner adopting a traditional pastoral posture that is once again set alongside Brazilian and Argentine rhythmic and melodic patterns in another complex fusion of genres. This like *The Girl from Guatemala*, intelligently marries orchestral and in this instance flamenco textures to draw a sensual landscape. These smartly performed (Area 31) and enthusiastically conducted (Anthony Aibel) renditions are superbly engineered through a Barry Wolfson recording that appropriately dissects these conflicting structures.

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RP



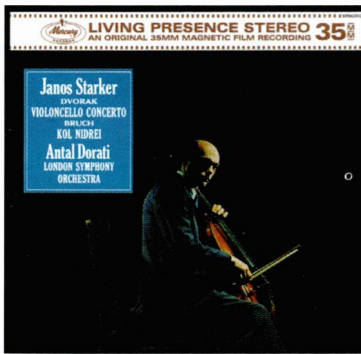
**The Best of Little Walter.**

Speakers Corner / Chess Records LP1428. **180g**

Now we're talking... now we're talking! This IS the BLUES. Little Walter Jacobs is one of my all time favourite bluesers. While called a "The Best of..." album, this is a first LP release of material only available previously on 45's and the sound quality is going to vary for sure. I've got a couple of copies of the original at home and they're scarcer than hen's teeth. The problem with both is nothing more than the less than fine quality vinyl Chess Records used. It's a great pleasure to have this stunning album on quiet, 180 gram vinyl. It starts off with a Walter classic, 'My Babe' and just keeps on going. Let me whet your appetite with some of the folks Walter is using on these tracks: Robert Lockwood Jr., Willie Dixon and Jimmy Rogers to mention but a few. Jacobs was one of the greatest blues harp players who ever lived. He died when he was not quite 38 years old. What a huge talent. These recordings are drenched in melancholy and a wailing harmonica like nothing you've ever heard before. The sound, in glorious mono, is to die for. There is nothing I can say other than buy it! You won't be sorry you did and I guarantee you'll get plenty of hours of enjoyment from this master bluesman.

RSF





Dvorák: 'Cello Concerto in B minor, opus 104.  
Bruch: Kol Nidre, opus 47  
Starker, LSO, Dorati.

Speakers Corner/Mercury **180g**

There is probably no Classical Music enthusiast on the Planet who hasn't heard of this performance. It's one a small handful of masterly crafted recordings which all offer near 'definitive' readings of Dvorák's masterpiece. (Others to look for might be Fournier/Szell on U.S. Epic (gold label, not UK SAX which has 'squeezed' the sound with two Strauss works on one LP; and/or Rostropovich/Karajan on Deutsche Grammophon). Regardless of which performance you may love, nothing will come close to the sound Mercury has captured at Wembley with this recording. Originally a 35mm recording, Willem Makkee, utilizing Wilma Cozart Fine's 1960 two-track mix downs, has once again, delivered a recording we all should treasure, and in by far the best, readily available sound. You will not find a better sounding issue of this unless you are willing to start shelling out substantially over £200 +... and even then you've got that whole Mercury stamper number minefield to traverse. My suggestion is to not waste your time but to order this today... I'm willing to bet you that your local reseller does not have it in stock! Top Recommendation and a must own recording!

RSF

RECORDING   
MUSIC



June Christy  
Something Cool

Cisco Records T 516 **180g** **2**

While it is widely acknowledged that June Christy's singing had its limitations, her albums for Capitol Records during the 1950s and early 1960s successfully maximised a talent for delivering both the up-tempo swingers and those attractively framed and heart-warming ballads of the style found here. *Something Cool*, released in 1954 as a ten-inch LP, was one of Christy's most polished recordings. Perhaps its greatest strength is the sympathetic and imaginative approach brought to these arrangements by Pete Rugolo. He provided the best possible orchestral settings for a voice that had a limited range but could still, under the right circumstances, beautifully encapsulate all the possible emotional outcomes from a romantic entanglement. She sings tracks like 'The Night We Called It A Day', 'It Could Happen To You' or 'I'm Thrilled' with that truly deceptive ease of a real pro. They are so deftly and smoothly handled that it is hard not to be impressed by the delightful phrasing and exquisite timing of this B-list performer. The Cisco re-master is a revelation too. Detailed, richly textured and, like these songs, simmering nicely just below the surface until another misty-eyed moment breaks cover.

Supplier: [www.vivante.co.uk](http://www.vivante.co.uk)

RP

RECORDING   
MUSIC



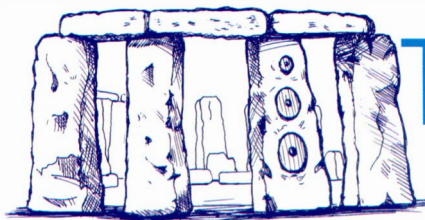
Ravel  
Daphnis et Chloé  
Valses nobles et sentimentales  
Minnesota Orchestra,  
Skrowaczewski.

Mobile Fidelity UP SACD 4008- Surround Series **SACD**

Another disc jammed with (almost 79 minutes of) wonderful music offered in rich, sonorous sound by Mobile Fidelity. This one disc contains some of Ravel's most exotic works and they are played sublimely by Skrowaczewski and his Minnesota Orchestra. As was the Gershwin release, this too is a 1975 VOX BOX issue and to my ears, the finest version of these performances ever released on SACD/CD/Surround. There is a delicacy in style portrayed by the conductor and his orchestra that is rare to hear unless one listens to the performances of Monteux, Cluytens, Paray or even Martinon in the stereo era. Not having much Ravel in the digital domain in my collection, this disc is a very welcome addition. I've mentioned in other writings my fondness for Ravel's *Mother Goose* and while a tiny bit short of complete, I am captivated with this version. There again, before you turn your nose up at the fact the *Mother Goose* is incomplete, most people don't realise how very few complete versions are actually available. This is another fine offering from MOFI that will totally seduce the listener, be they audiophile, music lover or both. The disc has it all and is another very highly recommended release you should have in your library.

RSF

RECORDING   
MUSIC



# The History Man

by Richard S. Foster

## Something sweet for your vinyl pancakes

Sometimes I can get myself in really big trouble. I'm going to try and blame this year's episodes on friends, but I'm not sure they're going to let me get away with it. It also helps if you have a weak mind and no self-control, both qualities I possess in abundance when it comes to my audio system and records.

To be fair, this particular pickle is actually RG's fault, so he's the real culprit. I was seriously intrigued by his review and subsequent product of the year award for the Koetsu Jade Platinum cartridge. My own recollections of Koetsu's were not that favourable – lacking a full range top-to-bottom presentation. My last experience, several years ago left me with a feeling they could offer a nice 'bloomy' midrange but the lower octaves were fat and sloppy and the top end was nothing to write home about. After reading and re-reading his review and then speaking with Roy, I felt I had to hear one. Either they'd changed out of all recognition or we were hearing very different things!

It all started innocently enough: Arturo Manzano of Axis Distribution-USA is the Canadian importer for Koetsu. When I mentioned my interest in hearing this cartridge, Arturo was kind enough to say this would not be a problem but that it would take a couple of months to obtain one. I wasn't in any hurry. We also discussed the Air Tight Disk Flatter he distributes and my undying interest in all things mono. This is when I first learned about the Shelter 501 II Mono cartridge. Clearly both products simply demanded review.

Well, that was easy and I felt good... until I went back to see Arturo toward the end of the show. This is when I bumped into Brian Hartsell, a long time friend and owner of the Analog Room in San Jose, California. (Brian is the only retailer I know that MIGHT have as many as one CD player in his store – if you

are very lucky.) He has a record collection to die for – and yes, you're hearing this from me – and he really knows his music. Hartsell is one of those die hard retailers who really digs his heels in about vinyl playback, and his shop is a beacon attracting people from far and wide to go through the record bins for new and used vinyl and just to talk music. It's a great store and if you're ever in that part of the world, stop in and say hello.

All I did was ask Arturo one small question about the Jade, which Brian overheard.

Well, that was that!

"Dude, you don't want that – you want a Coral." Excuse me?

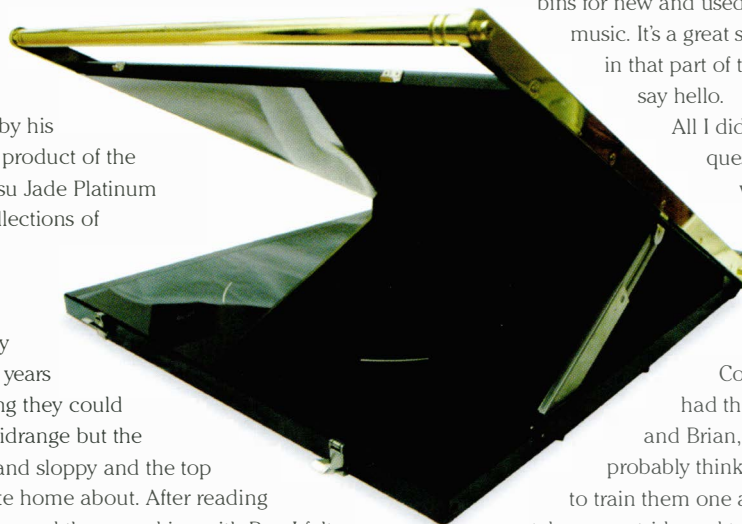
"Dude, you want a

Coral." What's a Coral? Arturo

had this huge grin on his face and Brian, rolling his eyes and probably thinking to himself - do I have

to train them one at a time? now decides to take me outside and teach me the facts of life,

Koetsu style. I won't bore you with the details, but needless to say I switched my request with Arturo. He was fine with this but advised that it would take even longer to obtain one of these. Again, I said no problem. Well to cut to the chase... the Coral comes in and I hear it and totally fall in love. The Koetsu Coral is not something that is going to be widely available. It occupies the top spot in the range, previously held by another exotic cartridge, The Blue Lace. Apparently there is only so much material – in this case-petrified coral – available from which to make bodies. The rarity value is matched only by the stratospheric retail prices: upwards of \$12,000! (No wonder both Brian and Arturo were smiling particularly wicked smiles.) The Coral is Koetsu's all out assault and statement product, encapsulating everything they know about cartridge design, and it definitely pushes the limits of the art. The Coral has everything anyone could



▶ possibly want from a transducer. It is open, airy; offers a full, rich and yet extremely natural sounding sense of body and power and of course it does several things I require: the bottom end is tight, clean and well defined while the highs are open and silky. The Coral has wonderful information retrieval and is unbelievably liquid. Nothing I've ever heard comes even close. In the classic Koetsu hallmark, vocal reproduction is to die for. "I've got to have it", I think, and so I made the purchase and will suffer the financial consequences for many months to come.

What the Koetsu story has to do with my Shelter review you might well ask – for that is where this is actually heading. One of my friends in Toronto, John Mah, is a Koetsu snob of prodigious, even unassailable proportions. He loves the cartridges and has at least two or three. Remembering those evil grins all too clearly I decided it was time for a little pay-back on my own account, so I invited him round for a listen. To say that he loved my latest edition is an understatement. I called him again a few weeks later, this time to hear the Shelter 501 II Mono. At the time of his arrival, the cartridge had about 15 hours on it and I thought it was sounding pretty good. Keep in mind I've listened to plenty of cartridges in my day and sometimes I believe you 'hear ahead of what is actually being heard.' What I mean by that is that sometimes you hear the potential rather than the actual sound. This may have been the case on this day.

We listened to about four or five records and John turns to me and says, "Put the Koetsu back in." I laughed and did so. Immediately John's smile returned. Unfortunately, he really was quite unimpressed with the Shelter. But if truth be told, when he left, I switched wands on the VPI and put the Shelter back in. I never thought it as unsatisfying as he and felt that maybe it still needed to break in.

There has been quite a stir in North America regarding the Shelter cartridges and most everything I've heard people say has been quite positive. This 501 II Mono is no exception. But, as I've discovered, you need to have a minimum of about 30 hours on this cartridge to hear what's really going on with it. From there on out, musically speaking, it only gets better. It seems somewhere around this 30-hour mark is the approximate point when the suspension begins to really settle

and break in. You MUST definitely readjust your VTA and VTF when this happens, as the cartridge's suspension drops down and this of course throws off all your original settings. You'll start getting too much bass information which warms and slugs the sound. This will be your tip off. (And YES, VTA is important for proper mono playback.)

This is a lovely cartridge with some unique qualities I've not experienced in mono cartridges I've auditioned to date. It's the first cartridge I've heard that contains just one coil and one magnet. Yes, fortunately, there are four pins for your cartridge clips for ease of connection to any arm-wand. The output is a healthy 0.4mV and the shape of the stylus is a 0.65 mil conical. The magnet is Samarium Cobalt as are the other Shelter cartridges and the recommended tracking force is easy as pie: anywhere between 1.4 and 2.0 grams. I've settled on 1.7 and have been happy with the combination of airiness and fine tracking ability that results.

There doesn't seem to be anything this cartridge doesn't like, musically speaking. No matter what I've thrown at it, it performs just the way fine cartridges should: it bring you closer to the music with as little in the way of 'additives' as possible. Each acoustic is defined as recorded (and yes, again I know it's mono). This, to me, is a very important quality.

I'm currently listening to *A Concert at the White House* on US Columbia KL 5726 (mono only) with Alexander Schneider violin, Pablo Casals violoncellist,

and Mieczyslaw Horszowski, piano. This is a very intimate recording venue, recorded live on November 13, 1961. The four works include pieces by Mendelssohn, Couperin, Schumann and 'Song of the Birds' (Catalan Folk Songs for Cello and Piano). This recording, on the wrong system, can sound exceptionally dry and clinical: Not so with the Shelter. More importantly, it is not causing the recording to sound overly rich either. Yes, there is some thinness to the sound, but this is clearly the way this particular recording sounds. I used this disc on purpose because it is a torture test that allows me to determine exactly what a cartridge is doing in my system. What I mean is that I know this record. I know its pluses and minuses and I have to hear those same positives and negatives with any cartridge I audition or I will become suspicious of what may be happening in the system, i.e., what is it masking, colouring or not reproducing properly? There is a



▶ wonderful presentation of the music by this cartridge. The 501 II is an impressive candidate for anyone looking to spend approximately \$1200 to front a mono playback system.

Needless to say, my friend John returned just as the Shelter had hit the 30 hour mark. I put on a favourite Prestige Bluesville of mine – BV 1011, *Blues and Ballads* with Lonnie Johnson and Elmer Snowden. The moment I cued the LP John said, “Too much bass.” He was absolutely right and I hadn’t noticed this just 15 minutes before he arrived – that’s how quickly things can change with this cartridge. I readjusted the VTA, adjusted the tracking force and we then settled back for another listen. Well, this time he was quite surprised. So surprised that he never thought to ask me to put the Koetsu back in. Lonnie Johnson has a beautiful voice and this is one great recording that gives you a total ‘in your room experience.

Rendered absolutely perfectly with the Shelter, the presentation was wonderfully live-sounding! By the way, if this album is too hard for you to find in clean shape, Acoustic Sounds has a similar album you should try. It’s available at moderate prices and on 180g vinyl. It’s not the same LP as BV1011, but represents more material that came from those sessions. I have both as they

compliment one another with different takes and tracks on each. John’s parting comments? “Nice cartridge.” Now when you think about the comparison between the Shelter and the ne plus ultra Koetsu, that is quite a compliment. I didn’t take it lightly and you shouldn’t either.

The Shelter 501 II mono does a great job of reporting to you exactly what you are feeding it in terms of vinyl. Each LP I’ve played offers a different acoustic and sound. The cartridge has lightening fast transients and tight control. I’ve really enjoyed my time with this cartridge and I feel that if you’re in the market to audition a mono in this price range, you’d be hard pressed to find something as musically satisfying as the 501 II. It’s really a sweet surprise and I will miss it.

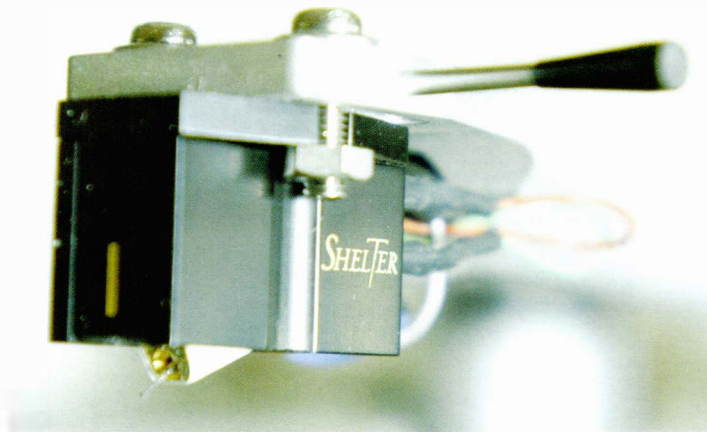
### Flatness is next to Godliness...

The Air Tight Disc Flatter Model DF-01 was definitely one product I thought the world did not need. Boy was I wrong on that. This is a must have unit for anyone with an extensive record collection. Because this is not an inexpensive product (\$1995), if there are two or three friends who could share the

cost this may be the smarter way to go. A dealer might also want to have this in house for his clientele and for a nominal fee, offer the unit’s services to his customers. For that matter, perhaps an audio society could chip in and buy one. When I talked to Arturo about the Disc Flatter in January. I felt I’d have it for the review, write some slightly jokey copy (it’s the easiest kind) and back it would go. Silly me. I remember making fun of a fellow phonogram member, Larry Toy when he bought his. Larry, I apologize . . . for I too have purchased one and I find it fabulous.

All you need to try it is a warped record and a few hours (four at minimum). The Disc Flatter is rather like a sandwich toaster, containing two smooth (glass like) heater plate surfaces. There are markings on the lower plate where the 12” record should be fitted. You put the record in, close the unit

and you then turn on the timer. The type of record will determine how much time you want to have it ‘cooking’. Thin, dynaflex or 1980’s vinyl would be heated for approximately one hour and then left to cool for a minimum of two. With an older LP or a new 180g record, you’d want to be heating it for two full hours, again with a minimum of two hours cooling.



Here is a major tip: I’ve found that if I do one record per day and let the LP sit in the Flatter overnight, everything always comes out perfectly – and I’m not tempted to interfere or rush things. This is not to imply that it does not work flawlessly using the 4-hour time frame; I’ve just found that one record a day flattened this way works best for my schedule. Another thought is that there is always the possibility you’ll forget exactly when you placed your record inside and should you try to remove an LP too early, damage could occur.

Operationally this is quite a simple device, but the heating mechanism and materials used are quite complex. There’s a specially designed semiconductor film heater that is only .2mm in thickness. The temperature tolerance is  $\pm 2$  degrees Celsius. The unit heats to a maximum of 65 degrees Celsius. Initial power consumption is 300 watts, but this quickly begins to drop to about 70 watts throughout most of the heating process. The DF-01 is approximately 475 x 75 x 554mm (WxHxD). The unit weighs around 10 kilograms. The top panel is very simple: from left to right there is a space for a 3A ▶



## Stop Press! L'Archet d'Or Preview

L'Archet d'Or Series Three is coming soon. It will contain the following records:

- OR IX - Agnelle Bundervoët - Ravel  
*Le Tombeau de Couperin, Valses Nobles et Sentimentales* (1959)
- OR X - Germaine Thyssens Valentin & Loewenguth Qtt - Fauré  
*Quintet NO 2 op 115 in C Minor for Piano and Strings*  
*Fantasy for Flute and Piano with Michel Debost, flute* (1961)
- OR XI - André Levy - Bach, *Cello Suites Nos 2, 3* (1962/61)
- OR XII - Le Trio de France (Jeanne Gautier, Geneviève Joy, André Levy)  
*Turiña Trio No 1, op 35 in D, Ravel Trio* (1960/58)

Given Glenn Armstrong's track record with the previous two box-sets (both Hi-Fi+ Record Of The Year winners) that should be mouth watering enough. But on top of that there's also a real surprise. Armstrong has revealed a pair of 45RPM special issues:

- ORSP 01 - Maurice Maréchal, Odette Pigault (p)  
Yves Levallois/ Henriette Roget - *In Memorium, Fauré - Elegy*
- ORSP 02 - Germaine Thyssens-Valentin, Pierre Mollet (bar)  
Fauré - *Le Bonne Chanson*

(By the way, I've heard them and I can tell you that these are absolutely STUNNING. The Maréchal recording alone is simply phenomenal!)

This is what Mr. Armstrong had to say about these: "ORSP 01 will be sent as a gift, without notice, to subscribers of BOTH sets - A01 and 11 - ONLY, with notification of A0111's autumn release. It is supposed to be a "surprise". This surprise package will contain a little note detailing contents of A0111 and will also inform loyal subscribers that if they choose to prepay A0111, they will receive - with A0111 - ORSP 02 for free. I will only post these details on my website after A0111 is ready to go. So you are really giving your readers an exclusive."

Armstrong further states, "These records are ONLY available to the faithful. I am very strict about this. Just like I will not sell individual copies from the sets, no-one will be able to obtain these unless they satisfy the conditions. They will of course be numbered. The numbers are allotted appropriately. For example, if you suddenly decide to go back for A01 now, your number will be later than the subscriber who bought A01 and A011 on release... of course! However, later is better than never! There are, of course, only 250 copies, just like the sets. One is available for everyone, if they truly belong to the club. Packaging will (as always) be special, if subtle."

I can tell you that these two 45RPM issues are so special that if you're not already a subscriber to the series, then you've made a terrible mistake. Anyone who loves Classical Music must own these recordings. Do yourself a favour and visit Armstrong's website at: <http://www.coupdarchet.com> and purchase these before they're all gone. These are reference performance recordings and the sound quality is absolutely to die for. Don't miss them!

▶ fuse, followed by a timer that goes from zero to one hundred and twenty minutes. To the right of the timer's rotary knob, there is a blue light that identifies when the unit is on heat.

I was advised that this unit only flattens 12" records, but I'm here to tell you that I've comfortably flattened 10" EPs as well. I've had one record, a rare Ducretet Thomson for years that was so dished, had I put my finger in the center hole, I could have easily enjoyed a bowl of Cheerios and milk with no problem. Dishing on 10" records is a major problem and I've always felt before that you couldn't do anything with them. I put this in the Flatter, twice actually, and the record is now absolutely perfect and plays flawlessly.

My dear friend and fellow writer Dennis Davis sent me a wonderful Nat King Cole record and I remember placing it on my Thorens 'table. When I turned on the 124, it was as if I was about to play a potato chip. Even the peripheral ring on the VPI TNT was not up to snuff with this beast of a record. One night in the flatter fixed this problem too! The machine is absolutely brilliant.

Air Tight offers some cautions when using the product and clearly states for you to 'practice' with a disposable record before you get into your collection proper.

At this stage, I've comfortably flattened 50+ records and no longer give it a second thought. I've had NO problems with the unit and not one record has suffered any damage.

If you have a large collection or can pool two or three of

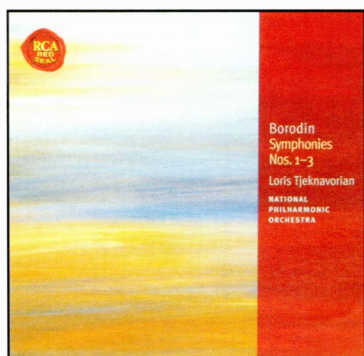
your friends together, this is a machine you really need to investigate. The important thing to remember is that you should clean the record before you place it inside the Flatter and that you should also keep the heater surfaces clean with just a bit of water and a soft paper towel. This is all you need to do prior to use. This is now an indispensable item in my bag of tricks and one from which I anticipate many years of happy service. ▶+

UK Distribution:

Koetsu:  
Absolute Sounds Ltd  
Tel. (44)(0) 20 8971 3909  
Net. [www.absolutesounds.com](http://www.absolutesounds.com)

Shelter and Air Tight  
Walrus Systems Ltd  
Tel. (44)(0) 20 7724 7224  
Net. [www.walrus.co.uk](http://www.walrus.co.uk)

All available in the US through Axiss Distribution-USA.  
Tel. (1)(310) 329 0187  
Fax. (1)(310) 329 0189  
Net. [www.axiss-usa.com](http://www.axiss-usa.com)



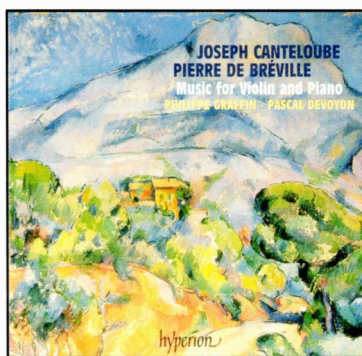
**Borodin**  
Symphonies Nos. 1-3

National Philharmonic  
Orchestra/Tjeknavorian

RCA "Classics Library" 82876 62321 2

While Borodin's *First Symphony*, let alone his *Third*, may not be the most interesting of symphonies, his *Second* is a masterpiece. It is wonderfully constructed, with the some of the most brilliant orchestration of its period. In fact, only Tchaikovsky's better symphonies, and perhaps Balakirev's *First*, come even close. It is a pure delight from beginning to end, with the most delightful melodies combining with tight and dense structuring, and Loris Tjeknavorian's reading of it is one of the most stupendous on disc. Actually, all three symphonies are handled with the utmost understanding and passion. He lets the National Philharmonic's players free; leaving them to inject the music with undoubted energy, and in so doing has permitted the excitement and vigour to flow. While the *Scherzo* is full of vitality and incredible drive, the slow movement is all seduction and sultriness. Then there is the most amazing of finales. The performances of the other two symphonies are no less successful; it's just that their compositional form is just less interesting. But then if you add in the production of Charles Gerhardt and engineering by Kenneth Wilkinson and Martin Atkinson, you still have a disc of Borodin that cannot be beaten.

SG

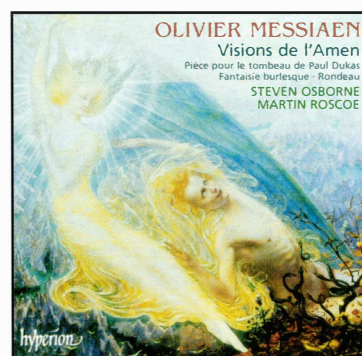


**Bréville – Violin Sonata No. 1**  
Canteloube – Suite: Dans la montagne  
Graffin/Devouyon

Hyperion CDA67427

During the early part of the Twentieth Century, the world of the avant-garde was gripping both France and Germany. The schools of late Romantic composition were being virtually dismissed, regarded as too conservative; yet this disc shows just how much the French in particular were missing. Pierre de Bréville is best known as a songwriter, but his epic *Violin Sonata no. 1* puts him in the same compositional class as either Chausson or Franck. Its four capacious movements reveal tremendous weight and body; yet there are also those ingredients typical to French instrumental writing: namely fluency and melodic charm. Canteloube's early work *Suite: Dans la montagne* clearly hints at the *Songs of the Auvergne*, but there is also some pure Debussy in the opening of the last movement that is rather reminiscent of the *Préludes*. With both works sublimely performed by Philippe Graffin and Pascal Devoyon, in a particularly intimate presentation, there is little to criticise here, although the recording balance just favours the violin, which in turn enhances the more delicate music of Canteloube over the richer sound of Bréville. In fact, this beautiful release can simply be regarded as a most welcome addition to the French music catalogue.

SG



**Messiaen**  
Visions de l'Amen/Pièce pour le tombeau de Paul Dukas/Fantasia burlesque/Rondeau  
Osbourne/Roscoe

Hyperion CDA67366

Following on from Steven Osbourne's previous Messiaen release, this CD goes one step further in regard to technique. Both Osbourne and Martin Roscoe tackle the seven movement *Visions de l'Amen* head on, producing dynamic themes and musical structures the like of which has rarely been heard before. Messiaen's trademark chords are produced with exceptional variation and particular harmonisation. The loudest passages emerge with terrific weight, yet there is also a wonderful transparency and subtle elegance when required, and this is helped by Hyperion's atmospheric recording. Other duos may have performed certain parts more dramatically, or add a little more playfulness here and there, but no one has produced such a balanced rendition on disc before. It is just a pity that the trio of solo works performed by Osbourne that follow are not quite up to the same standard. The work composed in memory of Paul Dukas is too slow, in the *Fantasia burlesque* others have certainly furnished it with more life and dance-like rhythms, and his *Rondeau* is simply too understated. But the real problem is that they appear insignificant after the monumental opening piece. It's a bit like *The Phantom Menace* following the original *Star Wars Trilogy*.

SG





**Paganini – Caprices Nos. 1, 2, 5, 9, 13, & 14; Sonata in E minor No. 12**  
**Baker – Ethnic Variations on a Theme of Paganini**  
**Pavel Sporc/Petr Jirikovsk**

Supraphon SU 3772-2 

Having already made a considerable impression with his sensational debut, Pavel Sporc, surpasses that first release, seizing the virtuosic moment with playing of utmost brilliance and élan. But this is not simply a recital of flamboyant violin playing. He also manages to add a sense of refinement, performing Paganini's *Cantabile in D* a little steadier, with a firmer tone than many others, revealing a depth of lyric beauty in the melody. The same holds true of the *Sonata in E minor Op. 12*, which sounds far richer in content. Even the *Le Streghe variations* and the *Perpetual Motion Op. 11* appear to have more substance than the usual physical exhilaration they often simply emphasize. With obvious intelligence, musicality, and virtuosity, as well as a healthy female following, Sporc has it all. This recital also offers an inspired treat: the premier recording of David N. Baker's *Ethnic Variations on a Theme of Paganini*. This splendid work takes the famous 24th Caprice through an unruly assortment of popular and contemporary styles, but also supplies a refreshing stylistic contrast. With Petr Jirikovsk most ably accompanying him, and very good engineering, this notable release brings to mind the thoughtful virtuosity of Milstein.

SG

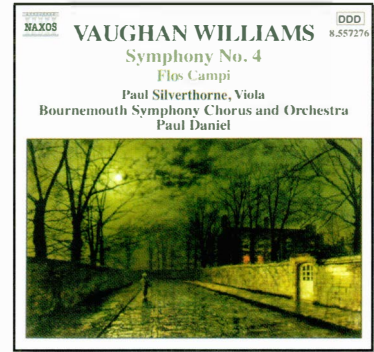


**The Origin of Fire – Music & Visions of Hildegard von Bingen**  
**Anonymous 4**

Harmonia Mundi 907327 

In the early 1990s, four unknown women decided to establish a group to sing medieval chant and polyphony. With this last recording, we have to bid farewell to Anonymous 4. They may be one of the most stylish and beautiful sounding groups around, exhibiting wonderful diligence, personal devotion and great sincerity, but praise should also go to their staunchly committed Harmonia Mundi and its engineers, who have constantly permitted us to appreciate the ethereal purity of their heavenly singing. While Anonymous 4 meticulously researched and intelligently programmed each performance, above all they enthralled their listeners by conveying a joyous pleasure, rather than the detached and emotionless, yet totally authentic interpretations of many others. All these qualities are again evident here, with a return to the chants of Hildegard von Bingen. In 1997, their disc *11,000 Virgins*, introduced many to her music. This time the theme is the Holy Spirit, particularly the visions of fire and light, with Hildegard's own chants combined with selected excerpts of these visions. While this review has turned out to be more of a tribute, any group who has delivered and maintained such a distinguished body of work for the last eighteen years, deserves it.

SG



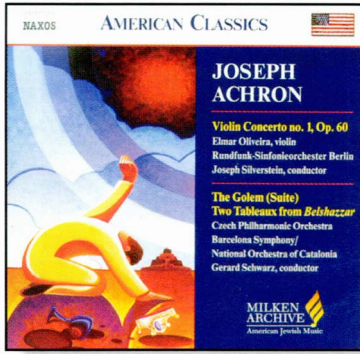
**Vaughan Williams**  
**Symphony No. 4/Norfolk**  
**Rhapsody No. 1/Flos Campi**  
**Silverthorne/BSO & Chorus/Daniel**

Naxos 8.557276 

Naxos continues its excellent Vaughan Williams cycle, one which already features a number of exhilarating performances. This latest example is certainly no exception, and Paul Daniel dispatches the *Fourth Symphony* with plenty of drive and attack: particularly in the last two movements where he manages to reveal prodigious detail, without destroying the music's soul. The Bournemouth players don't quite possess the ideal weight in the brass and lower strings demanded of the composition, but that is a minor quibble when this Symphony rarely experiences an extraordinary performance on disc. The couplings are exceedingly well done, with the *Norfolk Rhapsody* comprehensively poetic throughout its introspective passages, while also projecting impressive climaxes. *Flos Campi*, a rarity in concert and certainly one of the composer's most sensual and delicate creations, gets a much grander, more thrilling reading than usual, with the intensity of its more opulent and energetic sections tremendously impressive. The wordless chorus is distinctly atmospheric, and the engineers have not made the mistake of placing the microphones too close to the singers. In fact, the warm but clear sonics complement each piece of music more than adequately, resulting in a really very good all-round release.

SG





**Achron**  
Violin Concerto No.1  
Two Tableaux from Belshazzar  
Silverstein & Schwarz cond. Czech Phil, Berlin Radio & Barcelona S.O.s, Oliveira, violin

Naxos 8.559408 (CD)

White Russian Jewish émigré Joseph Achron was an accomplished violinist and a composer of exceptionally lush, almost cinematic, music. The two movements of his *First Violin Concerto* are an intense and rhapsodic journey towards religious ecstasy. Oliveira's playing creates a perfect sense of the excitement and mysteriousness that lies at the centre of Achron's broadly romantic score. A thought provoking and expanded *Suite* is an equally pictorial and rhythmically innovative piece. It is a vividly atmospheric and sometimes abrasively written examination of the creation myth where a creature, the Golem, is moulded from clay and brought to life by man - a disconcerting tale which bristles with moral dilemmas from beginning to end. The Two Tableaux, with their mix of ethnic Hungarian-like melodies, impressionistic images and good natured dances, are lighter and far less cerebral pieces emboldened by some lively scoring for brass instruments which is very much in keeping with a Russian music tradition. The orchestral playing is excellent throughout. There's a nice balance struck between the brilliance of the Berlin Radio Symphony musicians and the individual needs of the Oliveira solo violin. All three Orchestras are capably and sympathetically directed from the podium. Yet another unusual release for which Naxos are to be commended.

RP

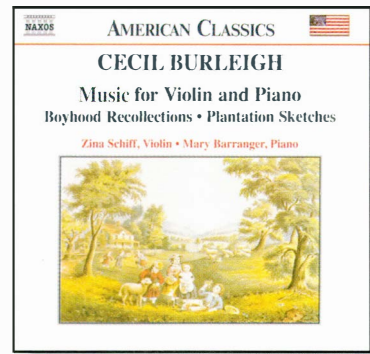


**Beethoven & Brahms**  
Triple & Double Concertos  
Karajan, BPO & Szell, Cleveland Orchestra  
Oistrakh, Rostropovich & Richter

EMI 7243 5 66902 6 (CD) 5

Karajan's expansive and muscular Berlin Philharmonic version of the *Triple Concerto* with its three stellar Russian soloists is a compelling one full of intelligence, charm and warmth. It also remains true to Beethoven's indication that the cello part played by an immaculate Rostropovich should take priority over the other soloists. Although their contributions are telling, we hear his cello first of all in each movement. However, Sviatoslav Richter's incredible display of conviction and integrity, and a charismatic David Oistrakh master class in violin artistry are both intrinsic aspects of this fine and intuitive performance. The Brahms *Double Concerto* (also taped in 1969) features the Rostropovich/Oistrakh partnership but was conducted in Cleveland, Ohio by that old martinet George Szell. An understandably disciplined orchestral account here allows the individual quality of its virtuoso sections to shine through - especially when a transparent and perfectly balanced recording such as this smoothly reveals that vibrancy and richness of their string tones. Great music, strong interpretations, exceptional soloists and some excellent engineering make these re-mastered concertos an essential and really satisfying addition to any collection.

RP



**Burleigh**  
Music for Violin and Piano  
Zina Schiff, Violin & Mary Barranger, Piano

Naxos 8.559061 (CD)

Cecil Burleigh (1885-1980) was a capable violinist, a little known composer and a professor of music who learnt much of his art abroad at the Klindworth-Scharwenka Conservatory in Berlin. Later, back in New York, he took up composition under Ernest Bloch, yet despite being a prolific and accomplished writer Burleigh has basked in relative anonymity. From the evidence here it is hard to understand why so few of his works have been recorded. This is an album of elegantly crafted and highly descriptive miniatures dominated by beautiful textures and pastoral themes. On this disc there are seven evocatively named collections with titles such as *Plantation Sketches*, *Nature's Voices* and *Boyhood Recollections* (all penned between 1910 and 1925) which then sub divide into vignettes - some barely a minute in length - that paint a lush picture of American life. Pieces like *In Cotton Fields*, *Reapers* and *Hushed Woods* speak for themselves, as do the *Five Indian Sketches*. The longest work, an opening *Impromptu*, is a shining example of the delicacy, sincerity and accessibility underpinning Burleigh's music. For this and the closing *Cradle Song* Zina Schiff (a protege of Heifetz) is joined by her daughter the sixteen-year-old pianist Cherina Carmel. These recordings with Mary Barranger on piano, are sensitively and sympathetically played throughout.

RP



# A Tale of Two Studios

## Preserving America's musical heritage by transferring the RCA Living Stereo and Mercury Living Presence master-tapes to SACD

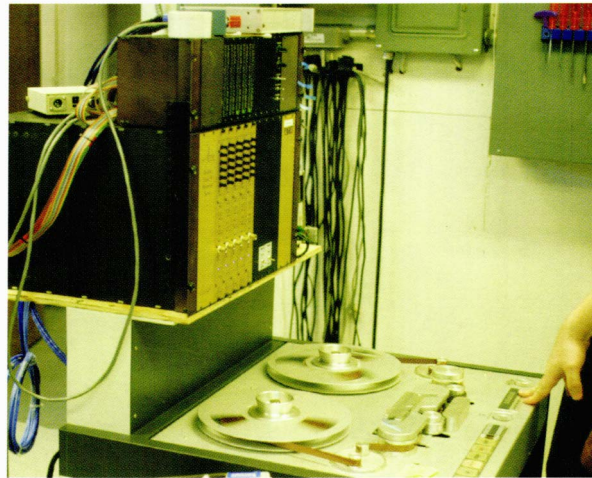
by Richard S. Foster

As an avowed fan of both the RCA Living Stereo and Mercury Living Presence records I'm fascinated by both their musical integrity and the passions they provoke amongst collectors and the owners of re-issue houses alike. Whole forests have perished in the discussions of relative qualities, while the computer time expended on internet debate must have materially contributed to the hole in the ozone layer. But with the arrival of the latest digital incarnations of these recordings, now transferred to SACD, the whole furore kicked off again. Would the silver disc finally banish the black? Would the bottom fall out of the market for mint condition, secondhand vinyl pressings? Would all those avaricious record dealers finally get the just deserts of their price-gouging past?

Of course, things are never that simple and what became abundantly clear at an early stage (and in a bizarre reversal of the reigning vinyl status quo) was that the RCA tapes had been significantly better served by the SACD re-issues than their Mercury equivalents. The longer I listened the more obvious the disparity became. The longer I listened the more frustrated I got. What, I wanted to know, accounted for the difference in quality

between these discs? At this point I doubted it was down to the tapes, which left the transfer process itself or the pressing of the discs as the likely culprits.

In February 2005 I made arrangements to visit John Newton of



Analogue tape replay via Studer.

Sound/Mirror in Boston. Sound/Mirror is mastering the RCA Living Stereo tapes for release on SACD, including the new down-converted CD layer. John (who is also the remastering supervisor) generously opened the doors to their studio and arranged for me to spend most of the day with himself and Mark Donahue, the mastering engineer responsible for the RCA Living Stereo SACD project. Dirk Sobotka, their DSD engineer was, unfortunately, not available. I would like to sincerely thank John and Mark for the generosity

they displayed with their time and open access to their studio. My thanks also to Blanton Alsbaugh, of Sound/Mirror who single-handedly opened my ears to multi-channel surround sound with the Beethoven project he is currently working on.

Blanton, I'm a believer. I hope to discuss this listening session at a later date.

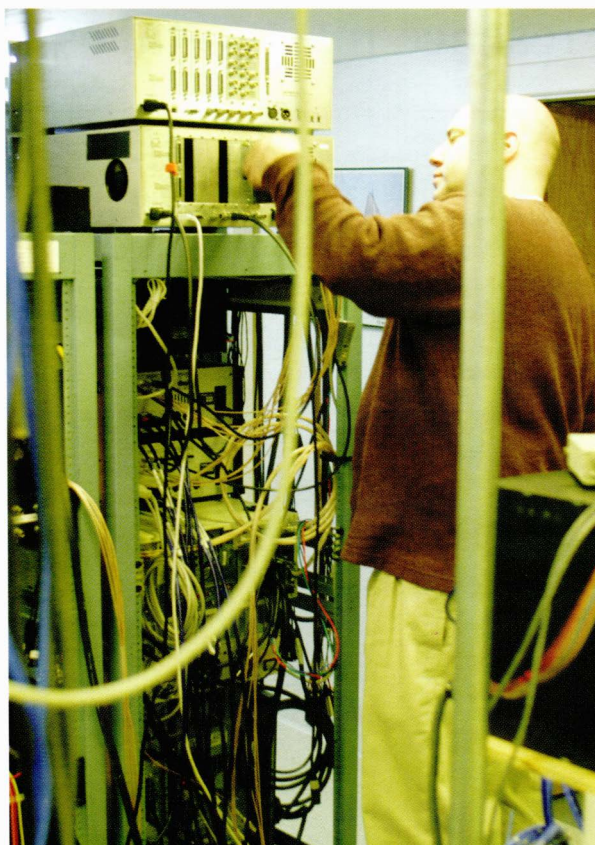
While attending the Munich High End show in May of this year, Kai Seemann of Speakers Corner Records arranged a visit for me to the Emil Berliner Haus in Hannover. Although most of this visit was spent with Willem Makkee and things analogue, Seemann was also able to arrange that I spend some time with Mr. Andrew Wedman, tonmeister

(balance engineer) at Universal Music and the man responsible for the analogue to digital conversion on the Mercury SACD project. His time was extremely limited and I am truly appreciative of the kind attention he gave me while I was there. Thank you, Andrew. The time spent with Makkee as well as Seemann and my trip to Pallas will be saved for an upcoming article. Stay tuned, please.

The day I spent in a nondescript building near the corners of Green and Myrtle streets in Boston, was one of the most informative days I've ever

▶ experienced. The credentials of the people I was involved with at Sound/Mirror are impeccable: Newton was a staff technician for Dolby Labs and Vanguard Records before founding Sound/Mirror in 1972. Donahue is a graduate of the University of Massachusetts-Lowell, with a degree in Performance/Sound Recording Technology and has been with Sound/Mirror for well over a dozen years. He's handled virtually every engineering seat within the organization. Alspaugh brings to Sound/Mirror many years of experience as a conductor in addition to his work as a producer, engineer and manager in commercial classical radio. Although unavailable this day, Sobotka received his Diplom-Tonmeister degree from the Hochschule fuer Musik, Detmold in 1996. Before joining Sound/Mirror he was a mastering engineer at Sound Byte Productions in New York City and some of his credits include working for labels such as Nonesuch Records, Teldec, EMI, Sony and BMG. In 2000 he was the recording and editing engineer of the first commercially released DVD-Audio containing a 192 kHz stereo layer. In a nutshell, these guys know about cutting-edge digital sound and know where that edge is. But what's equally impressive is their depth of knowledge regarding the history of the stereo recording process and technology, from early two-track tape releases in the 1950's through vinyl playback right up to where digital technology is now – and where it might be going. All this information was dropped on me before 11AM and believe me, I'm glad so much of it was recorded.

I also got to hear master-tapes that hadn't been played for at least 45 years. How can I be so sure of that? The spools were secured with a particularly virulent type of splicing tape that hasn't been used in 50 years – partly because of the foul deposits it leaves behind on



Mark Donahue checking connections.

removal. It was a salutary lesson as to the very real problems facing any serious remastering project on a purely practical level. It was there in Boston and it was there in Germany. In fact, it accounts for one of the most common issues with older tapes, along with shrinkage or stretching, poor splices and shedding. These tapes are deteriorating – in some cases at an alarming rate, quite literally fading or crumbling away – and the opportunities to preserve them are becoming increasingly limited. That's the primary pitch for DSD, as it can be

used comfortably as an archival medium once the analogue signals are converted to high-resolution digital and then stored on a hard drive. Sure, analogue copies would be lovely but dream on...

My main interest of course was the process itself; what happens from the time you place a master-tape on the machine through to its being replayed and converted to DSD.

Except that I soon discovered that a huge and vital part of the process occurs before the tapes are even played. I hadn't appreciated that just checking the master-tapes is such a major production. Simple winding and rewinding of the tape and checking for some of the problems we've just discussed is not an easy job. Then there is the manual alignment of the original tape with the heads of the tape playback machine being utilized. After that you must determine the proper equalization, etc. Once this is done, there is an initial listen to 'see what you have' and then there are decisions that need to be made if there are drop-outs, splicing issues or other unforeseen problems. It's

not a simple process. If you think this is just put the tape on the machine and push play... think again. What was common to both facilities is the amount of thought and problem solving effort required before they can even start. What you don't want to do, in any way, shape, manner or form, is inadvertently cause any damage whatsoever or accidentally do something that cannot be reversed. This is NOT easy work. These were all things we discussed before physically going into the equipment room and actually performing the transfer tasks. ▶

▶ I asked the team at Sound/Mirror whether if at any time do they, or have they, listened to the original LPs. As far as Donahue is concerned, and I think he's absolutely right, "the tapes are the Holy Grail. After all, the LPs were made from the tapes. A lot of the quality of an LP is euphonic from the distortions that are inherent in the playback medium, and I don't see how you can garner more information from a

together as good as possible." In addition he adds, "More importantly, the producers and the artists of the time when all these decisions were made, were not thinking about the LP medium and its limitations. They were listening to the three-track output

also mono and stereo teams working at the same time in those early sessions. So you could very easily have different mixes for the mono and the stereo



releases. Approximately 1959 to 1960 is when this stopped and notes would then be added to the tape boxes, i.e., Do this for monaural and this for stereo, etc. Being a bit of an archaeologist also helps, believe me.

As an aside, we got into a brief discussion about cutting engineers and why there hasn't been much written about who did the cutting at RCA. Many of us are aware of George Piros of Mercury stereo fame and John Johnson the cutting engineer of the Mercury monos. I learned that RCA was of course, a union shop and for many of

medium that ultimately contains less information than the source material. When you listen to the tapes, it's virtually impossible with a very, very wide dynamic range tape to get more information on the LP than exists on the tape. A lot of times, the cutting engineer was working very, very hard trying to get as much of what is on the tape onto the LP. There were decisions and compromises that were made at the time."

Newton also makes some very good points. "Cutting lacquers was an art. There probably weren't, at any one point in time, more than a dozen people who could cut a good classical lacquer – forgetting about the limitations of the machinery they were using. Understanding the music, understanding the dynamics of the music, and the limitations of the medium and making everything come

from the console and three-track playback from the tape. So, their original ideas are contained and determined that way and we wanted to hold those up as the main and most important value set, not what most people grew up with, the vinyl medium with its attendant issues."

I learned that as regards the Living stereo tapes, with the exception of the 1954 sessions almost everything was recorded with three track machines. The exception was the recordings done in 1961 at Decca in London, which were strictly two-track sessions. Keep in mind that there were



these guys, it was just a job over "X" hours. In fact, you could have one person cutting the lacquers for an opera and when his shift was over, someone else would come in and finish the job. This could easily explain why some ▶

▶ operas do not sound the same for all six or eight sides. As an interesting aside Newton talked a little more about how difficult it really was cutting quality lacquers because it was such a mechanical process with so many variables. A fair analogy could be the quality of an automobile manufactured on Wednesday versus one manufactured on Friday afternoon or Monday morning... Which would you want to own?

We went into the equipment room with the miles of cables, connections and a plethora of hard drives, analogue-to-digital converters (and vice versa) and computers, and I saw the 1980 Studer tape recorder, which has of course been highly modified and rebuilt. To this they added an Aria playback set. It's a five-channel box: Two of the channels are optimized for the quarter inch stereo playback head and three of the channels are optimized for three channel half-inch playback head. There are two head blocks and of course these can be changed based upon what is being played. When they change the heads they change the channels that are in use because all the cable links and resonances are compensated for inside the box. The signal path comes out of the Aria and can be routed through an AME equaliser – which they had to make. They use this for AME tapes only; if the tape is not AME, then the signal goes straight from the Aria through the mastering chain into the A-D converter. Siltech cable is used for the entire signal path which is actually quite simple and straight forward. Everything is controlled remotely from the studios (I saw and heard three different studios, each room being a different size and each contained different speaker set-ups).

Mark was winding a tape and believe me, this is an art in itself. It's done very slowly because of some of the problems we discussed earlier with the condition of the tapes. For example, because of the sticky tape

issue if you do this too quickly, you lose information – which rears its head as a missing (or misplaced) chunk of oxide. The tape he was working on highlighted yet another problem; the calibration tones were missing.

The tones are typically at the head of the reel. This was done before the recording session had been started by the recording engineers. They calibrated the machines, for example



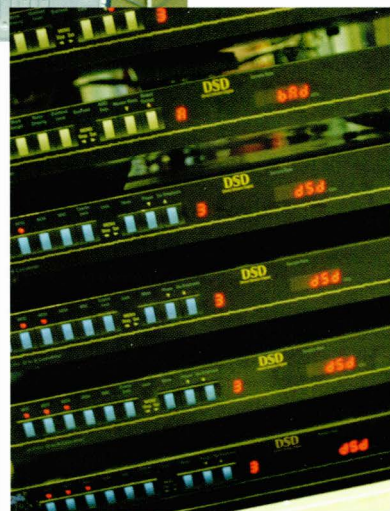
dCS stacks at EBH and Sound/Mirror.

for high and low-frequency pre-emphasis, bias and level. Basically what this meant was that at the beginning of each session they would tweak the particular machine to maximize its ability, establishing the replay parameters for the tape to be recorded. Without them it's impossible to accurately replay the tape, regardless of its condition. Mark selected one he knew had the tones and said, "Listen to this." First I hear a tone and then a voice comes on and says, "Disregard previous run. Use this run (then a tone) December 8, 1958 frequency Chicago, AME 1KC Stereo for level set." The voice was that of Lewis Layton!

We then walked through the equipment room and into the mastering studio with its computers and mastering tools. Sitting on the desk was a switch box. Mark spent time adjusting levels as we were going to hear the material in three different

formats: the original three-channel master tape, three-channel DSD and finally, two-channel DSD. All that would be necessary would be for me to push a button on the switch box to go from one format to the other. In front of the desk was a set-up consisting of three 1990's vintage B&W 801 series III speakers driven by a Threshold S500, the center-channel powered by a Classé amplifier. After Mark finished

his set-up, he turned his chair over to me and said go for it! I sat at his desk and the tape began to roll. What immediately impressed me was the sheer brute power of the orchestra coming from all



three speakers. A wall of sound! It really was as if I was sitting right in Orchestra Hall. You could hear everything. Certainly I'd never heard this much information from any vinyl playback source! It was truly fabulous. I hit a button and immediately I was listening not to the original tape, but hearing the tape through the DSD converters in three-channel sound. ▶



▶ Again, phenomenally impressive and hitting the button back and forth to A-B the original tape directly or through the DSD converters proved a very interesting point: There wasn't a whole lot of difference. Actually, let's be more precise than that; the differences were so small as to be musically insignificant. Could I reliably identify the difference between the master and the DSD feed? No way. Okay, so there's a switching box involved but even so, this is a pretty impressive performance – particularly for a digiphobe like me! I was, quite honestly, astonished.

I really expected to hear a much wider shift between the two sources. Going to two-channel DSD was more obvious, but that's got more to do with the replay chain and available headroom than the DSD format itself. This was still master-tape playback I was listening to and although it's only two of the three

channels available, it remained immensely impressive. This went on for almost twenty minutes and I can tell you I was quite literally shaken with what I heard. The Mahler *4th* was wonderful – and not only the original tape – but listening through the DSD converters as well.

But most interestingly of all, the character of what I heard at Sound/Mirror with the RCA material, is exactly the same sonic character I get at home. Of course we're talking different set-ups and all, but there is no manipulating of the signals as far as I can remember. They don't fool

with the goods. I remember what we listened to in Manchester last year while demonstrating good three-channel SACD playback and we used the last movement of the Munch *St. Saens' Symphony No. 3* and once again, this is what I heard in Boston. The dominant sound of the original tapes is clear to hear, and what is on the tapes finds its way onto the Living Stereo SACDs – which might help explain why the three-channel replay of those discs is so darned impressive.

I had a great time with these exceptionally knowledgeable people and it's reassuring to know just how



capable the hands responsible for these transfers really are. I'm personally delighted they've been given the opportunity to do this work for Sony/BMG, breathing new life, digitally speaking, into not only the Living Stereo SACDs, but also the down-converted two-channel CD layer as well. For my money, it's the best I've ever heard these performances sound from silver disc. Now I understand why.

It was some three months later, that driving through the outskirts of Hannover with Kai Seeman, we came upon the rather large complex that is

Universal Music. After passing through the security gate we were expected at a small location neatly tucked in one corner of the grounds: Das Emile Berliner Haus! I knew the minute I met Andrew Wedman I'd like him. He's Canadian. Joking aside, he's a very nice man and totally devoted to what he's doing at Universal. He was right in the middle of transferring *The Music of Leroy Anderson*, volume 2 (U.S. SR90043). While with Wedman, I asked many of the questions I had previously asked at Sound/Mirror and the answers were just as I expected. Probably the biggest problem they

have is the condition of the tapes. Not only is there dramatic acetate tape shrinkage (some of the 35mm film tapes have shrunk in excess of two feet!) but there are problems with certain sections of material actually missing. For example, he mentioned that one of the future releases was going to be SR90054, the *1812*

*Overture*. It took him forever to find the carillon part of the tape, and despite searching far and wide has yet to find the cannons portion of the recording. Clearly there have been gremlins in the archives, exacerbated by the convoluted history of Universal's many acquisitions. With tapes having been moved from various parts of the world, shunted from pillar to post, things have clearly gotten more than a little mixed up. The audiophile view of master-tapes as the Holy Grail, cherished and preserved for posterity receives yet another serious dent, adding ▶

▶ further to the need to archive this material now.

Because Andrew was literally in the middle of a transfer, I had neither the time nor the freedom to listen that I'd enjoyed at Sound/Mirror. But I was able to enjoy Anderson's *Typewriter* piece. While Universal has all the toys and equipment as well as the bells and whistles to boot, I'm afraid that what I heard in the digital domain at Berliner Haus, is exactly what I hear at home from the Mercury SACDs. It's missing some life and drama, transparency and dynamic range. I didn't hear the master-tapes at this time, only the

DSD feeds, but I heard enough of them earlier whilst I was with Willem Makkee (as well as knowing what he's cut to vinyl for Speakers Corner) to know what's out there as a source if you choose to use it. The sonic problems seem to lie in-house, because there's no question that

what I was hearing in the studio once again bears the same sonic thumbprint that characterized the first batch of Mercury SACD releases.

Discussing this with Andrew he showed me examples of the tapes he's working from. Whereas Makkee is relying on 60's vintage stereo mix-downs, the SACD issues are being drawn from the original three-channel masters. Now in theory that constitutes an advantage, but the chaos demonstrated by the mislaid elements of the *1812* combined with the actual physical condition of the tapes themselves more than negates the potential benefits. Andrew

showed me one tape which had not only shrunk by more than three feet, but had succeeded in twisting back on itself through a full 720 degrees! The state of the oxide layer can only be imagined. I think he has been struggling manfully with the challenges presented by these tapes, which have demanded considerable work and even editing to make them useable. It's a frustrating situation in which he finds himself, especially as the two-channel tapes are delivering demonstrably superior sound. What price the original master...

Incidentally, speaking of editing,



the situation regarding DSD is far from straightforward and requires dedicated workstations. Sonoma and Sadie are the approved options, although widespread concerns regarding loss of signal quality (see the article regarding the Peter Gabriel SACDs in Issue 24) have meant that many people actually resort to editing in PCM before final conversion to DSD! However, there is now a dedicated 24bit/384kHz PCM based system called DXD (Digital eXtreme Definition) which allows greater flexibility and capability without any loss of signal quality. It's also interesting to note that both Berliner

and Sound/Mirror had full suites of Meitner, Genelec and dCS converters, different units often being employed for different functions within the chain. But both studios independently professed a marked preference for the dCS stack when it came to classical work, so the digital hardware employed certainly doesn't account for the differences heard. Whilst there are other equipment variables, such as the actual tape machines employed, one has to conclude that, after all it's actually the tapes themselves that are the biggest variable.

However, what is clear from my

experiences is that the DSD format is capable of exceptional performance as an archival medium. Its ability to accurately hold the information content of master-tape over time is far more stable than the analogue alternative. Indeed, it's the failings of the latter that create most of the

problems when it comes to the current preservation of this material. How successfully you can overcome the challenges presented by these crumbling artifacts in part defines just how good those archival transfers will sound. But the other part of the equation is how you carry out the transfer itself. DSD stores the information you feed it with self-effacing honesty and really can deliver on its promised performance. But like so much else in hi-fi it's a case of garbage in, garbage out. Just rejoice in the fact that the tools are most definitely out there, if we choose to use them... ▶



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