

# Parallel Universe...

## Seeking system stability with Vertex AQ

by Roy Gregory

Like the other reviews in this issue this is a system review – but it’s a system review with a difference. Say the word ‘System’ to most people interested in hi-fi and they’ll start mentally ticking off a source, amplifier and speakers. They might even get as far as cables, but the lion’s share of their attention is definitely going to be directed at those boxes full of electronic components. But, in the same way that you can’t listen to an amp without giving it a signal and connecting it up to some sort of speakers, you can’t listen to electronics without providing power, signal transmission and some kind of physical support. So, if the speakers are just as important to the notion of ‘System’ as the amplifier, then so to are the other elements, such as cabling. Yet all too often, despite recent realisations of the impact that these elements have on overall performance, they are dismissed as peripheral or mere ancillaries, despite their fundamental role in the great scheme of things.

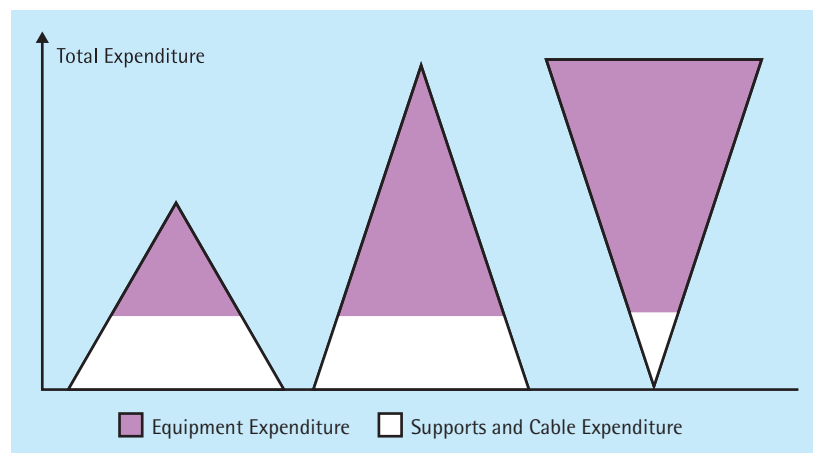
Which brings us to this system and an alternative approach in which the electronics are considered secondary and we instead concentrate on those elements that define the system environment and conditions of operation. After all, when we build a house, it’s the walls, windows and roof that get all the attention, but it’s the foundations that hold them up and keep them in place. In building, a firm foundation is critical to the longevity and stability of the structure as a whole: it’s no different in hi-fi. Those foundations consist of the cabling and

physical supports within the system, and just like with building, if you try and add them as an afterthought, it’s apt to be expensive and ultimately disappointing!

So far so good: the concept is clear, and even if it’s a little alien it’s not too hard to grasp. After all, when we listen to music reproduced by a hi-fi system, we are in a very real sense, listening to the electricity that comes out of the mains, the signal that passes between the boxes. What makes this system different is that it proposes a whole new concept or approach to understanding the way in which spurious energy within the system is transported and effects what we hear. The implications are such that “ancillary” aspects of system construction take on a new and fundamental importance, not just as enhancements to the performance of the electronic boxes, but as critical to them delivering any sort of meaningful performance at all. If that

sounds like exaggeration, consider this; if when you build a house, you overspend on the structure and skimp on the foundations, you end up with something that might look initially impressive, but all too quickly the cracks start to show. Better by far to pour the money (quite literally) into the foundations and dial back on the structure itself; you can always add a second storey later. I’ve long believed that the vast majority of hi-fi systems are top heavy; it’s only recently become apparent just how precariously balanced most of them are; a fact which explains why a) most of them are so musically disappointing and b) why the law of diminishing returns applies to attempted “upgrades” with such a vengeance.

Imagine a system as an equilateral triangle, sat on one edge: It’s an incredibly stable structure. Add something to the top of it and you increase the height without the whole thing moving. Now stand it one of its points: add anything to the top ▶



▶ edge and unless you happen on the point of perfect balance, the whole lot is going to teeter and topple over. Yet that's exactly what we are trying to do with hi-fi systems, simply because we haven't invested enough time, attention or money in the fundamentals on which they're built. The problem is that new approaches require new understanding, new rules and new priorities, which is exactly what we're going to attempt to establish here.

It's also important to point out that the Vertex AQ products are far from the only solution on offer. However, they do embrace all aspects of the approach into a single, coherent product line, as well as extending the understanding of what is happening within the system itself in what is an essentially unique and I believe vital way, which is why I chose to use them.

As to the electronics, I established basic four-box systems of digital source, integrated amp and speakers, with equipment variously drawn from dCS, Goldmund, Bel Canto, Gryphon and KEF, allowing us to ring the changes while keeping the basic set-up as simple as possible. The electronics were installed on a Cambre Core rack and wired up with Acoustic Zen signal cables and a mix of Siltech and chord mains leads. In other words, a situation representative of what might be considered a pretty well sorted system, with a coordinated cable loom as far as signal goes, and probably more attention paid to the



mains and system support than most. (Many thanks to Jeremy Baldwin at The Right Note for help with the loan of equipment.)

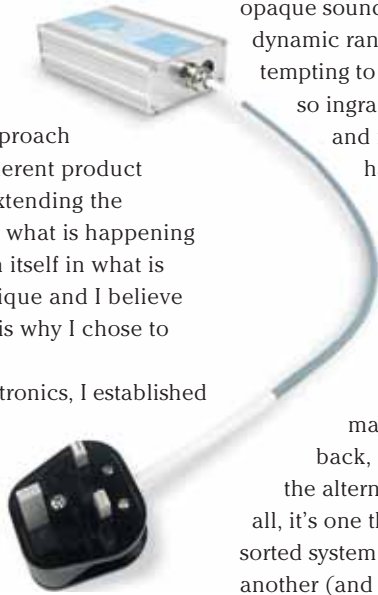
Initially at least, the results were far from encouraging, with a thin, disorganized and disjointed sound, opaque soundstage and minimal dynamic range. It's immediately tempting to start pointing fingers, so ingrained is the impulse, and it was hard to stop my hands closing inexorably about the chassis of the Bel Canto, prime suspect as far as I was concerned. Instead, Steve Elford of Vertex, on hand to advise on strategy, managed to hold me back, insisting instead on the alternative approach. After all, it's one thing making a well-sorted system sound better, it's quite another (and far more relevant) to transform the proverbial bag of spanners – and this wasn't sounding THAT good.

The question of course is where to start. After all, laying a foundation gets awful messy if you start pouring concrete before you've dug the trench. Our point of departure, primary priority, our trench if you will, was the mains. That might seem like a surprising choice, given the priorities that pertain in more general

understandings of system balance, but that's exactly the point. Cables, or more specifically changing them, is often regarded as "tweaking", terminology that reflects the magnitude of change expected. Well, this system didn't need "tweaking" it needed a full-scale overhaul. As I said earlier, you should consider the electricity feeding the system as its basic raw material. Gross flaws here will easily obscure more subtle changes within the system infrastructure, so first priority is to sort out the source (sound familiar?) otherwise you won't be able to hear what's going on later. This really is front-end first – it's just that in this case the front-end in question goes beyond the signal itself and into its very fabric.

Our first step was to place a Vertex mains lead and Taga distribution block between the existing mains leads and the wall. Long time readers will be familiar with the Vertex mains leads, or more specifically the large, extruded aluminium boxes part way along their length that set them apart from the competition. Of course, these aren't the only cables with boxes in them, but they're the only ones where those boxes are designed to absorb and dissipate energy from the conductors themselves. It's a concept that

holds true across the entire Vertex cable range, ▶



▶ from mains to speaker leads. It makes them heavy, often awkward to use and position, definitely hard to hide but also unique. At £342 for a 1.5m lead, they are also far from cheap, although that price puts them solidly in the middle ground rather than the upper reaches of expense – power cords are like anything else; you really can pay as much as you want just to get electricity into the system.

The Taga six-way distribution block is new. Neatly built into an attractive, square-section aluminium chassis constructed from panels rather than the more usual (and far cheaper) extrusion, it's six 13 Amp sockets are star-earthed with an external post for attachment to an external earth spike. The casework also contains additional mechanical absorption and a passive shunt filter to reduce RFI carried by the mains. The Taga costs £795, which seems like a pretty good deal given that the equivalent standalone Silver Jaya filter weighs in at \$545. It's also mightily effective. In one sense, we took three steps at once, adding not just the star-earthed distribution block, but the mains lead and a clean earth



all at the same time – but the results spoke for themselves. We used a range of discs during the direct comparisons but there were two constants: Joe Jackson's *Summer In The City*, a live trio recording of enormous energy and atmosphere; and Coltrane's *My Favorite Things*, chosen for its complex patterns

and inter-relationships – and its less than wonderful recording.

Given the flat, opacity of the original sound you might consider improvements easy to be had, but consider too just how destructive that disjointed presentation is. Even expecting the change and hardened by exposure to similar equipment, I still wasn't ready for the impact delivered by the Roraima mains lead and Taga block\*. The improvement in separation and transparency along with the removal of the insidious grain that had seeped into every corner of the soundstage, blanketed every bit of life or energy in the music, was like having a London smog lifted clear of the speakers. Disconcerted by the initial results from the system, the transformation rammed home with a vengeance the basic levels of performance I take for granted on a day to day basis, simply because my set up does mirror the Vertex approach. Of course, the changes I've just described could be dismissed as

merely cosmetic, but that's to misunderstand the way in which systems make music.

The added clarity and lower noise floor delivered a significant

increase in dynamic range, producing a more expressive and involving performance. We're talking piano here remember, which means that weight and placement of notes are the player's main modes of expression. Cleaning up the mains input transformed the playing of both Jackson and McCoy Tyner from one-dimensional plinking

into something with musical range and a relationship with the other instruments. There was still a long, long way to go, but this was one major step in the right direction. And that's only one effect. The deep, churning bass line of 'Fools In Love' actually started to gain some shape, the beginning and end of notes emerging from the murk, while the



entry of the voice and piano no longer simply pushed the low-frequencies into the musical farscape. So, both the intelligibility and the inner balance of the music have changed significantly.

Now bear in mind that we haven't actually changed the basic system in any way. All we've done is placed the distribution block between it and the wall. Much conventional thinking would actually decry such a step, dictating separate sockets for each unit; so much for convention. The sad truth is that we've been getting it wrong for years – despite the readily audible evidence of that fact. Except that all too often the evidence itself has been obscured behind poorly executed cable and support strategies; or more likely, no strategy at all. Time to turn your thinking on its head, if you haven't already done so, and understand that your system starts at the wall socket...

Just to ram that home even further, the next step in the process was to get rid of the mix and match mains leads. Out went the Siltech and the Chord, to be replaced by a Roraima Silver Lite for the CD player (£623 for 1.0m) and the higher current Roraima Silver (£799 for 1.0m) on the amp. That's a pretty big step up in price, especially given the ▶

\* I can't help feeling that Vertex might help themselves by adopting no less memorable but at least more pronounceable names for their products!

### The alien concept of mechanical absorption...

The notion that vibration in systems is a "BAD THING" is hardly news. We even have a word for it – microphony. To that end, people have spent years talking about isolation and damping devices designed to protect systems from external mechanical interference – and very effective they've been, at least in some cases. However, there's been a massive blind spot in this approach: What about vibration generated within the system itself? After all, electrical components rattle when they pass a signal, transformers vibrate as soon as you turn them on, disc transports spin at high speed and speaker drive units are actually designed to vibrate. What's more, all these bits and bobs are joined together by strips of metal, metal that transmits vibration from one place to another really, really efficiently.

So, consider the mechanical energy generated by a speaker drive-unit. That is directly coupled from its chassis down a metal rod or wire to the crossover components and then the terminals. These will carry that energy into the speaker cables, which will pass it straight back to the output devices! (Yet another reason why the output transformers in a valve amp help its sound.) That's the most extreme example but it's one that applies to every single system. The same process occurs throughout your electronic components, just at a lower level – but then the signal is at a lower level too.

The Vertex approach is two-fold: firstly to sink energy out of the

electronics themselves and secondly, to prevent it passing between them.

The former isn't news, with established products from the likes of finite elemente, Stillpoints and Symposium all taking this approach. Within this pantheon the Vertex platforms and couplers are amongst the best and easiest to use. But what really sets the company apart is that second part of its strategy, isolating components one from another through the signal path. This is done by blocking the transmission of energy down the cables, by applying mechanical absorption to the conductors themselves. That's what's in the boxes.

At this point I can see eyebrows raising and the cognoscenti preparing to scoff... Well, Vertex were on the receiving end of that reaction quite a lot – so they developed a simple demonstration. They'll have you don a stethoscope and then, holding one end of one of your cables against its mouth, they gently rub the other tip with a coin. Gently, because if they hit it your eardrums would probably meet in the middle of your skull! You hear every single scrape of metal on metal – that's how effective a mechanical conductor your cables are. Repeat the experience with a Vertex lead and you hear next to nothing – even if you do hit the end of the lead.

It's a mightily effective demonstration of just how much mechanical energy can pass down a conventional cable – and how little gets past the Vertex absorbers. Of course, the cable itself still has to sound good, but that's easy – you just listen for that!

► fact that the leads being replaced are themselves perfectly respectable. Note also that we're using the silver leads on the equipment, but a standard copper lead on the Taga. Shouldn't it be the other way round? Actually, the system hierarchy is such that the benefits of the silver leads won't be heard until after the mechanical damping and RFI filtering of the Taga has had its effect. They in turn add another layer of mechanical absorption, creating a cascade of diminishing interference, a cascade that's all too audible as the silver mains leads simply extend and refine the benefits of the Taga still further. Greater texture, separation and more delicate discrimination of tiny dynamic shifts all contributed to a greater sense of life, immediacy and individuality to voices and instruments, helping to lift them out of the recording and into the room.

Having sorted out the raw materials being fed into the system, next step was to create effective exit paths for the energy generated within the electronics themselves. Enter then equipment supports in the familiar shape of the Kinabalus I've discussed at some length in previous

issues. These are basically platforms, topped with granite that covers an absorptive matrix and shrouded by a cosmetic surround, all standing on four squidgy feet. They come in three varieties: Standard, Super and Hi-Resolution, the difference being the degree of absorption provided and the resulting cost. But you don't just sit these under the equipment. Instead you use them in conjunction with a trio of couplers. These consist of two aluminium cones, tipped top and bottom with rubber and a third piece of the same height. This is a complex shape machined from tool steel, with a sharp point on its upper tip, three curved arcs that form a tripod around its lower edge. It looks for all the world like a particularly savage drill-bit. These three pieces are placed between the equipment being supported and the Kinabalu platform, bypassing the standard feet and instead providing a single extremely efficient route down which mechanical energy can pass from the unit's chassis into the dispersive matrix. At Steve's direction I placed a Hi-Resolution platform under the CD player, a Super under the

amp, using standard 35mm couplers in both cases. (Prices for a Kinabalu set up start at \$327.50 and go up from there, depending on size and platform/coupler choices. The items we used totalled \$627.50 for the Super, \$877.5 for the Hi-Res versions)

The sonic impact was immediate, in every sense of the word. You couldn't miss the increased information, separation and



focus, the way instruments, especially the bass, were able to retain their own space and identity irrespective of what was happening around them. Likewise, the increase in dynamic range and energy in the playing gave a serious injection of life and musical contrast, although interestingly, although the soundstage now reached forward in a more inclusive way, the increased ►

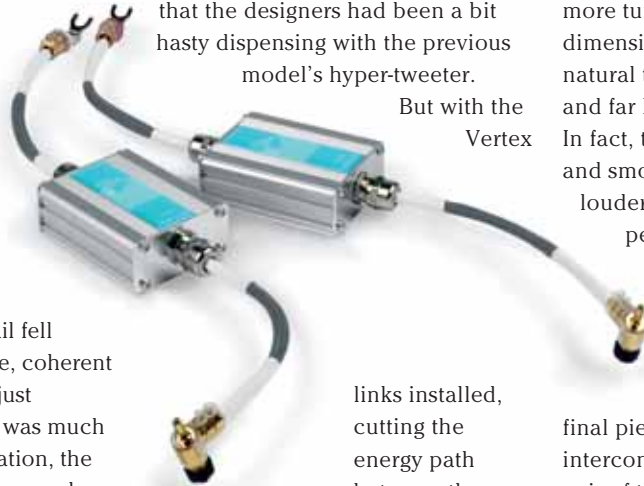
definition had if anything revealed the shortcomings in the sense of musical flow and coherence. Mr Elford, matching my quizzical look with a faintly maniacal grin, produced with a flourish a pair of Hi-Res couplers, identical to the 35mm high, tool steel standard versions, but with a mini-matrix built into their lower cavity. These he substituted for the standard couplers already in use.

Suddenly all the extra information and detail fell into place, creating a single, coherent whole. Now there weren't just increased dynamics, there was much greater dynamic discrimination, the weight and emphasis of drum and piano, the shape of the plucked bass notes far more emphatic and expressive. But the most impressive change was that for the first time the subtle phrasing that underpins Jackson's work became evident; for the first time the piano and vocal parts were connected, one underpinning the other rather than divorced and disjointed. Musically, this was the biggest change yet, making the up-charge of \$50 each for the Hi-Res couplers over the standard ones an absolute no-brainer. For the first time the system really started to hold my attention, allowing the music and musicians a range of expression and colour that was previously totally lacking.

Having achieved such spectacular results by draining energy from the equipment, I couldn't wait to try cutting the other exit paths – the ones down the cabling. But once again, Steve surprised me by started where I least expected, replacing the mid to treble jumpers on the KEF 207/2s with a set of Mini Moncayo links (\$495 for four). These short cables

replace bi-wire links, inserting one of Vertex's absorptive boxes in the process. They may not be particularly elegant, but boy do they work. As detailed in the KEF review, prior to their introduction I thought that the designers had been a bit hasty dispensing with the previous model's hyper-tweeter.

But with the Vertex



links installed, cutting the energy path between the mid and treble drive units (even though they share a common chassis) immediately restored the sense of air and space as well as removing a nasty layer of grain. Whispering noises on the Coltrane disc which had previously sounded like brush work, texturally and rhythmically intact. Of course, such detail was welcome, but the real difference was in the unforced sense of clarity that illuminated the music, allowing you to hear further into the soundstage, to position things more precisely in space. Such insight is critical to musical coherence as a whole, helping define the precise relationship between performers, so often heard as the chemistry that energises a great performance. Sure enough, Joe and boys were really starting to cook!

Next up was a set of Moncayo bi-wire speaker cables (\$1769 for a 3.0m bi-wire pair), and

for the first time leads with boxes at both ends. It creates something of a logistical nightmare, but once again, once you hear the benefits you'll be loath to let them go... Deeper, better defined and far more tuneful bass; greater solidity, dimensionality and presence; more natural tonality, especially on vocals, and far less strain across the range. In fact, the whole system was sweeter and smoother, able to play far louder if required, while musical performances had a clearer structure, hanging together better and making far more sense and for far easier listening.

And so to the final piece in the jigsaw – the interconnects. First up were a 1.0m pair of the Silver Solfonn leads (\$895). Once again, these have boxes, but although the original design had one at each end these latest versions have a single, larger box with feet, making them far easier to handle and dress. Once installed the benefits are obvious, the Vertex interconnects lifted a veil from the music, improving resolution, transparency and detail, heard as increased instrumental texture and colour. But most importantly of all, they removed a final blockage from the sense of musical flow. Finally, the ▶



► musicians and their music stood away from the speakers, which totally disappeared as a source of sound. Shut your eyes and you were greeted with a single coherent space, performers and instruments within it, the boundaries defined by the reflected notes of their music.

Mr Elford couldn't help but ice the cake, substituting the Hi-Res version of the interconnects (\$1295) for the standard leads. These use identical plugs and conductors, but offer more sophisticated absorption and unbleached cotton insulation in place of Teflon, delivering even more resolution, and a more natural

to system support and the cable loom, the fundamental foundations of system performance. The Vertex components deployed here are far from cheap, but in purely performance terms they represent a bargain, both as upgrades and in releasing the performance potential in the electronics you've already paid for. At no point in the process did the cost of the upgrade seem expensive given the musical results. Indeed, translated into equipment terms, you'd be well pleased to achieve these levels of improvement from a change of electronics costing many times as much.

But the real lesson is in the result

as a whole; the way the completed system allowed the music to free itself from

the shackles of reproduction. A good foundation is a good foundation: once you've got it you can build

pretty much anything on top of it, as long as you don't



warmth and weight to the tonality of instruments, without any clogging of their dynamic or energy envelopes.

Whilst I've played with various of the Vertex pieces before, this is the first time I've experienced the whole range working in concert. Likewise, whilst the basic concept is familiar, indeed it's the basis on which I set up and cable all the systems that I use, I've never been able to extend it to blocking the transmission of energy between equipment, an approach that's unique to Vertex. But what is blindingly, staggeringly obvious once you've trodden this path is that we've grievously underestimated the importance of a coherent approach

overdo it and make it top heavy. That's why this "system" is all about the fundamental elements. It doesn't overly concern itself with the electronics because it will make almost anything you add to it work to its best advantage. I'm not saying you don't need decent electronics, but don't buy a Ferrari if you live at the end of a cart track. Get your drive tarmaced first... And as we've discovered, the impact of this approach on the performance of even quite basic electronics is frankly astonishing. The simple fact is, most of us have never heard what our expensive electronic boxes can do; but as the man said, "The times they are a changin'." ►+