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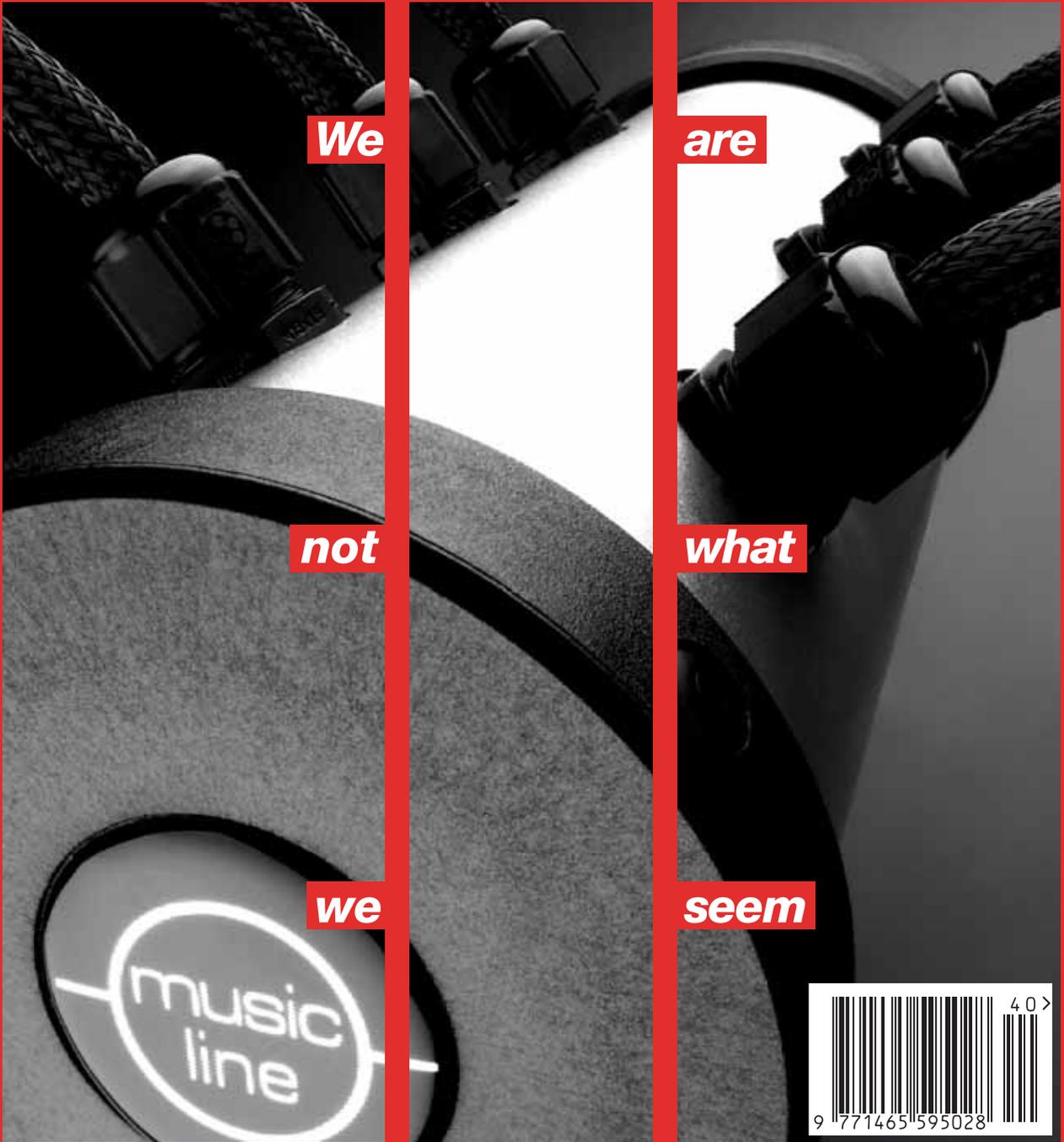
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Main Connections...

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. ►

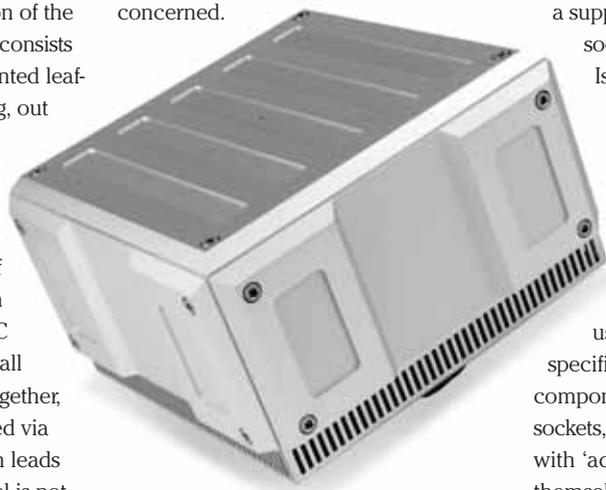
▶ Avoiding as many fallible contacts as possible is a major rationale behind a rather strange looking device called a Powerigel (pronounced Power-eagle), a component developed by Naim's German distributor Music Line, and specifically oriented towards supplying mains power to a multi-component Naim system.

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 cleanliness, 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

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

Naim Audio Ltd

Tel: (44)(0)1722 332266
web: www.naim-audio.com

Vertex AQ

Tel: (44)(0)1454 326496
web: www.vertexaq.com