The IsoTek Aquarius mains conditioner

By Alan Sircom

This product arrived just very slightly too late for consideration for this year’s awards. So think of this as a preview for the 2010 Awards, because a mains product really has to do something extremely special to beat the IsoTek Aquarius.

The new ‘EVO3’ Aquarius sports a pair of 16 Amp, thermomagnetically fused high-current outlets, plus a quartet of 5 Amp, bayonet fused, auto-adjusting medium-current outlets. These feature the company’s own ‘Adaptive Gating’ technology – an auto-sensing filter stage that adapts to the current draw of the load. First appearing in the high-end Nova and Sigmas power conditioners, this is claimed to provide the perfect filter delivery for each piece of equipment connected. It also calls upon IsoTek’s new KERP (Kirchoff’s Equal Resistance Path) technology developed for the latest EVO3 line of conditioners, said to deliver a more coherent sound, because it spells a very pure, symmetrical signal path through the unit.

IsoTek has also developed a new choke design, with improved magnetic material that is claimed to offers increased frequency bandwidth, 67,500 Amps of instantaneous and repeatable protection and a case that creates an effective faraday cage when closed.

I’ve been a GII Minisub user for some years. It was the product that above all others made mains conditioning a feature in the UK hi-fi scene, even winning over those most curmudgeonly of mains hold-outs, Naim users. It was keenly priced, sorted out the sound of mid-priced equipment perfectly and was the sort of thing that sat nicely in the equipment rack.

I’m not the only GII Minisub user out there, and here’s a hint… put it on eBay or trade it in before word gets out about just how good the Aquarius really is.

The whole auditioning process took about 30 seconds. Play piece of music on GII MiniSub. Play it again on Aquarius. Wonder why you were so attached to the GII MiniSub (in fairness, without the GII MiniSub, there would be no Aquarius, but those intervening years of development made their mark). What we have is a sound that is fuller, seemingly louder and more dynamic, rising out of a quieter background. All the things the MiniSub did to music a few years ago… but more so. Over the next two days or more, things get even better. Add in the Extreme power cable (highly recommended in its own right, and if you buy the two together you shave £100 off the cable price) and things just improve still further. Going back to the original is like going back to hamburger when you’ve dined on steak. Going back to the original mains is like eating the box the burger came in.

And the downside? Well, the short answer is we’re still looking.

Sometimes we worry about ‘mk II’ products when the original was so good. Will it be a Godfather Part II, or will it a Blues Brothers 2000? Fortunately, it’s a real treat and a giant leap forward, especially for (soon to be ex-) GII Minisub owners. Very highly recommended.

**TECHNICAL SPECIFICATIONS**

- **Number of outlets:** 6
- **Type of outlets:** 16A UK unswitched
- **Standard mains inlet:** C20 IEC
- **Mains voltage:** 100 - 240VAC
- **2 x High current:** 16 Amps
- **4 x Medium current:** 5 Amps
- **Maximum current:** 16 Amps continuous
- **External mains fuse:** 5 Amps (13Amps UK)
- **Dimensions:** 444mm x 85mm x 305mm (WxHxD)
- **Weight (boxed):** 9.0Kg
- **Price:** £795 (available in black or silver); £1,090 with Extreme power cable

Manufactured by:
Audio Power Systems Ltd
URL: www.isoteksystems.com

Distributed in the UK by:
Sound Fowndations
URL: www.soundfowndations.co.uk
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New Age

Is IsoTek’s Aquarius the dawning of a new era in mains conditioning? Paul Rigby finds out...

I’ve always been suspicious of gadgets and liquids and sprays and boxes which don’t appear to do anything but light up in various shades of blue. However, despite my inherent mistrust and concomitant grumpiness I do pride myself with having an open mind. The result, after testing, has been a reviewer in a constant state of surprise. Yes, cables do improve sonics, demagnetising your vinyl and CDs does make a difference, correct shelving does enhance sound quality, and leggy blondes can put a smile on your face [steady on Paul! Ed]...

So it was with this growing sense of assurance (although I may have dreamt about the last one), that I tackled IsoTek’s new mains conditioner, the Aquarius, the official successor to the company’s own popular Mini Sub, originally released in 2003.

So what does a mains conditioner actually do? Basically, it gives your electricity supply a wash and brush up, filtering out any spikes, removing noise and preventing any sort of contamination either directly from the mains or from one component to the other (utilising, in IsoTek’s case, Kirchoff’s Equal Path of Resistance technology). If you believe in that old adage, ‘rubbish in, rubbish out’, often applied to sources such as turntables and CDs, then look at your mains electricity as the real source of your hi-fi. Once distorting noise enters your system from the mains then your hi-fi is up against it from the off.

The new Aquarius arrives with six sockets, two 16 Amp, high current outlets for power amps and the like, plus four 5 Amp, medium current outlets for CD players, tuners, et al. Each socket is isolated from each other and features its own filtering system. The medium current sockets also feature Adaptive Gating that changes the degree of filtering dependent on the load. Other enhancements include a new choke design with improved filter stages and updated magnetic materials plus the outer aluminium case (measuring 444×85x305mm and weighing in at 9kg) which, in effect, acts as a Faraday Cage providing enhanced shielding.

SOUND QUALITY

Listening tests took place with an IsoTek-supplied Extreme cable that plugged the Aquarius into the mains plus two IsoTek Optimum cables (£190 each) to attach my power amp monoblocks to the high-current sockets and two IsoTek Elite cables (£125 each) attached to the medium-current sockets to plug in my other system components.

I initially span the Jeff Beck reissue ‘Blow By Blow’ (see classic cuts, p113) on vinyl, and jazzman Brad Mehldau’s new ‘Highway Rider’ (Nonesuch) CD. My initial impression was that a sense of calm suddenly reigned over the whole performance. There was extra focus to the stereo image while extended listening alerted me to new details and information that emerged from both mixes. Bass remained tight but more relaxed, lower frequencies seemed to have to make less of an effort to be heard.

Probably the most notable effect of the Aquarius was heard on the Nancy Wilson LP, ‘Who Can I Turn To’ (Capitol). Whenever Wilson extended a note by utilising her vibrato, the Aquarius was able to more easily follow the voice as it moved up and down the frequencies during the vibrato sequence and do it more effectively than the older Mini Sub I had on hand for reference, too. The greater clarity and enhanced, quiet background of the Aquarius allowed the voice to be properly tracked for the first time. Without the Aquarius, an upper midrange bloom tended to mask the vibrato at source.

CONCLUSION

Don’t view the Aquarius as a method of solving problems in your current system set-up, but see it as a way of enhancing what’s already there. I regard the IsoTek as another step in helping to remove what I consider to be the most critical obstruction to good music in any hi-fi – distortion and its associated noisy cousins. Purifying the musical signal via improved speaker design, better cables, demagnetising your LPs and CDs, lifting your turntable to an isolating platform or buying a mains conditioner, not only allows your components to really show what they’re capable of, but also enhances the appreciation of the music you’re playing. That the IsoTek Aquarius revealed previously unheard details from my familiar LPs, says it all.

VERDICT

An effective improvement to a good hi-fi system, this serious product justifies its premium price.

ISOLETE AQUARIUS £795
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FOR
- clarity
- midrange detail
- bass control

AGAINST
- nothing at the price
Can it be a sign of old age already? If someone had told me twenty years ago that I would one day write a piece about a mains filter – I would have laughed as I hurried off on my way. But when editor in chief Cai Brockmann approached me with one of his infamous, bimonthly cold calls to review a new test object, I accepted without hesitation. "Give it to me", was my ecstatic response.

It's bound to happen to every hifi nut eventually. You start saving early on and carefully assemble your loudspeakers and all kinds of components, usually replacing them one by one over several stages, until one day you can finally call the provisional hifi system your own. Then comes the initial fine-tuning. You invest in the acoustics of the living space (you'll also experience your first relationship upheavals in this phase at the latest), experiment with different loudspeaker arrangements, spikes, equipment platforms and support feet, all kinds of LF cables and much more. Most people call it quits at some point, but not everyone.

Some take the shortcut right to hardcore esoterism, investing in “informed” granite slabs, mystical blue electrosmog remediation lights, drawing with black marker around the edges of their CDs, putting up “activated” stickers on their windows, waving expensive magic wands over their cables before listening, and hanging bell-like resonators in the room (this usually marks the official start of the separation, including maintenance payments). Others remain at least pro forma on the science-based path and invest in costly power cables – or in a mains filter, the purchase price for which one could easily buy a record player and have something that could be called useful. This piece of equipment is exactly what I now have at my home. How could it come to this?

Very easily – in the past ten years, I have found (and I needed to, at times reluctantly) that astonishing things tend to happen in the hifi segment. Some tuning measures, though they may sound esoteric, actually do make an audible, reproducible sound improvement. And by the way, many don’t – that is worth emphasizing once again at this
juncture. It became clear to me that mains current is anything but "clean" (i.e. except for a flawless sine with a constant mean amplitude, it supplies no further harmonics), when a knowledgeable master electrician once lent me an amusing device that allowed me to hear the background noises floating around in the mains current. Sort of like an amplifier for sound coming from the power outlet with a steep notch filter at 50 Hz. Holy smokes! The things you could hear – a hearty burp when the refrigerator started up, a shrill hissing and buzzing when using the dimmer on my halogen ceiling light, a strange creaking when turning on my laser printer – combined with lovely, intermittent musical interference from the radio and waves from the Tempelhof airport that used to reach all the way to Schöneberg.

And since alternating current is by definition foreign when it comes to operating hifi components, all of the transformers, switching power supplies and such built into the components are simply a crutch. As a consequence, some manufacturers of ultra-premium hifi equipment turn to battery power, as this is to only way to truly deliver "pure" raw power material. If you then consider that what ultimately resounds from our loudspeaker is simply rectified, strained, stabilized current, onto which the music is modulated with considerable effort, it follows that one needs to begin right at the front of the signal chain – right at this very current – in order to achieve maximal sound quality.

This is exactly what the products from IsoTek do. This manufacturer has dedicated itself wholeheartedly to the issue of "clean power*. The product portfolio primarily encompasses power cables of the highest quality (and price categories) as well as active and passive mains filters. I have received the IsoTek EVO3 Aquarius – a mains filter with six outlet sockets, which could easily pass as the output stage when viewed from the front. Supplying power is the affordable power cable EVO Premier from the same the company; it not only goes well with the

### Interview with Keith Martin, IsoTek

Keith, this device looks like a sophisticated output stage – but it’s actually a mains filter. Is that really necessary? Well, the time and effort we at IsoTek have put into mains filtering is considerable – it might be unparalleled. For example, the EVO3 Aquarius features six filter sockets in the back; inside, each one of them has its own current path which is isolated from the others – to my knowledge, no other company is doing this. It’s actually like an extremely complex power strip in which the connected devices cannot interfere with one another. That’s the reason we can’t really make it much smaller. And we gave it a “classic” design, which allows it be integrated in existing high-end systems as easily as possible.

But why should I add a mains filter to my expensive system in the first place? Doesn’t the music lose some of its dynamism? That criticism comes up often, but that’s not the case with IsoTek. We pay meticulous attention to filtering out only the disruptive elements in the current and to maintaining the full dynamics of the music recording. In fact, we can demonstrate the effect of the mains filter with this device here (he presents a mains noise analyzer). It allows all of the mains interference signals to be heard as actual sounds (he demonstrates the difference between “with” and “without”).

**Wow, I didn’t expect such a drastic difference...**
Yes, it is quite amazing to see what a clean current can do. It’s no wonder that a premium hifi system will show its appreciation with a substantially better performance.

So an electric current that is as “good” as possible is essential for the listening experience?
If I may offer an analogy: No one would think of filling their fancy sports car with inferior gasoline. So why should I expect my premium system to run on contaminated power?

**A good comparison, Keith. Thank you for our talk.**
The good news: It actually works, especially for me at home. I deliberately scheduled my test sessions during the times in which the power in my apartment was noticeably strained. And as soon as the EVO3 Aquarius came into the game, the improvement in my chain’s performance was astonishingly clear. My CD player is an Audiolab 8200CDQ. Its digital signal is led by coax into the BMC PureDac and symmetrically converted via XLR to the Abacus Ampollo output stage. From there, it goes to my reference loudspeakers, the Neat Acoustics Momentum 4i and the Tannoy Turnberry Gold Reference.

But what exactly happens as the EVO3 Aquarius performs its duties? I observed noticeable improvements in three areas. The most significant effect can be seen in the spatial representation. With the EVO3 Aquarius in the loop, there are considerable enhancements. Sound sources can be more precisely located, seem firmly anchored in their position, and are perceived to go a half meter further in depth and fan out more extensively in breadth. This positive effect can be seen in all musical genres and styles. Orchestras have a more precise depth gradation, mixed voices sound considerably more convincing, even chamber music is more enjoyable, especially when produced in such a manner that the space in which it is recorded is “alive” with the music. Hall sounds more natural, refined – it even seems possible to actually imagine the qualities and nature of the place it was recorded (cool, warm, woodsy, etc.). In Mogwai’s song “Take Me Somewhere Nice”, for instance, the second guitar after the intro is perceived to be coming from one meter to the right of the right loudspeaker. When the drums come in, it almost seems possible to visualize the room in which the microphone is set.

Aquarius, on the practical side, it is also included in the price.

I have the ideal working conditions and challenges to offer the British double pack: Last August I moved into a new apartment; downstairs, a snack bar is located on the first floor. Apparently, their massive pizza oven packs a heavy load: In the evening when their business is booming, my power is so compromised that even my living room lamp slightly flickers. Things calm down again at 11:00 pm sharp, when the place closes. And now we – finally – have the reason that I wanted this device for a test. Get it?

What does the EVO3 Aquarius do?

On the one hand, it filters out all of the harmonics and interferences from the incoming mains current. It can reduce the types of interference described above – also called RFI by electrical engineers – by up to 60 dB, for instance. On the other hand, it ensures that the interferences generated by the hifi chain itself are eliminated to the greatest extent possible. During rectification and straining of the supply voltages, the power supply units of the components distribute the harmonic impulses “back” into the mains. In other words, a battle on two fronts.

1 Clear the ring: Six outlets are ready and waiting for power-hungry components

2 Could be an output stage, but isn’t: pleasingly minimal, yet premium-quality and substantial design.
In terms of high-frequency representation, my chain can deliver considerably more with the EVO3 Aquarius as well. This is especially true when it comes to drums and percussion instruments: Cymbal, rattler, shaker, sizzler – they all sound remarkably more detailed, and it’s easier to differentiate them from one another in their timbre – even the cowbell sounds positively more metallic, more bell-like.

Last but not least, there is also a bit more to enjoy in terms of bass. Obviously, the mains filter can’t provide any tonal modifications (that would be questionable from an electrical point of view, and you’d also have to worry about the mental state of the reviewer if he said it could). But the impulses seem to me to be crisper and more refined. This can be heard beautifully in Linton Kwesi Johnsons “Reggae Sounds”: The bass drum appears to have a more immediate effect, the bass lines sound groovier and purified.

In short: The IsoTek EVO3 Aquarius is worth its salt in every respect. It enhances the system with an undoubtedly audible upgrade, while giving its owner the good feeling of not having purchased it based on esoteric nonsense but on an immaculate design that can be relied upon. Pure genius!

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**IsoTek EVO3 Aquarius**

**Mains filter**

**Input:** Mains inlet (C19 IEC)
**Outlets:** 6 mains outlets (2 x 16 A, 4 x 5 A)
**Mains voltage:** 100–240 V.
**Total available power:** 3680 W
**Total transient power:** 18400 W
**Delivery contents:** IsoTek EVO Premier power cable (unit price: € 99)
**Finish:** Silver or black
**Dimensions (W/H/D):** 44.4/85/30.5 cm
**Weight:** 9 kg
**Warranty period:** 2 years
**Price:** € 1395

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I have often wondered what they feed thoroughbred race horses with. I bet it isn't carrot tops and potato peelings, that's for sure. Nor would I imagine they fuel Formula 1 racing cars with petrol from the local supermarket either. The same goes for Hi-Fi systems; feed them on a poor mains supply and they are not going to run at their optimum performance.

What does a “mains conditioner” do then? In simple terms it gives the electricity supply a jolly good tidy and smarten up, taking out surges, spikes and fluctuations, removing noise and induced radio frequencies, neutralising them so they don't enter your Hi-Fi components. “I don't have any of that” some may say, but you would be truly shocked just how much the electricity supply varies in voltage and sometimes frequency too, plus these days the National Grid is being used for digital data transfer, not forgetting either that many home broadband systems operate via the mains in the house wiring, not confined either solely to the house itself that has it installed, because some will leak back into the supply lines. Thermostats and motors found in fridges, washing machines and central heating controls are notorious for causing unwanted clicks and whirring which can be clearly audible through a Hi-Fi system. If you live near an industrial estate or a farm you might get all sorts of nasty artefacts reflected back into the mains supply. Add to that some DC offset where direct current voltages appear within the AC waveform, imbalances where either the positive...
or negative cycles are curtailed (this happened in my previous house) and as you can see, a mains conditioner clearly has it's work cut out standing sentinel over what can be transported inwards via the mains supply. Therefore I don't regard a mains conditioner as an accessory or a luxury, I regard it as essential and hence have had one in my own system for a number of years and wouldn't be without one now.

However, I have also heard some mains conditioners in the past that managed to squeeze the life out of the music and suppress dynamics to a marked degree, so I will be paying particular attention towards that trait during the evaluation.

Construction

Built into a substantial case, this is a solid piece of engineering. Measuring 444x85x305mm and weighing in at 9kg it is the right size to slot into a standard sized rack. When powered it has just two small faint blue LEDs in the central backlit panel which are not distracting, so it's rather nice having a power indicator lamp telling you it's switched on, rather than TELLING you it's switched on with a glaring light – a nice touch. The power switch and safety cutout is underneath the chassis just off centre to the front right. It is a bit of a fumble getting your fingers in beneath the case to locate the switch, but given that the unit should be permanently powered up then it isn't such a major issue for the rare times you may need to reach underneath for it.

On the rear of the unit is six 3 pin UK mains sockets, two of which are deemed high power outlets for use with components such as amplifiers and power amplifiers that can deliver 3,680 watts continuously per socket and the remaining four are for lower current draw units like CD players, DACs and phono stages, etc., able to supply 1,150 watts continuously per socket. The sockets are of good quality and grip the plugs well. IsoTek say that each individual socket is monitored for power consumption and are isolated from each other so a heavy current demand on one socket will not detriment the others.

Power inlet is by a 3 pole 20 amp C-19 IEC connector. IsoTek thoughtfully provide a power cable suitable for the role with the Aquarius and it isn't just any old power cable of indeterminate or generic parentage plonked into the box, it is one of their own products, namely an Evo 3 Premier. As it is included as part of the Aquarius package I will give a brief description of it here and Hifi Pig's own Jerry did in fact carry out a brief review of this cable back in December of 2013.

The Evo 3 Premier is only supplied as a 1.5 metre length, which should be more than adequate to fit the majority of installations. Conductor material is 40 strands of 99.9999% OFC silver-plated conductors with Teflon (FEP) dielectric with a 2mm² diameter. Connectors are custom made 24 carat gold plated and to IsoTek's own design, which is a refreshing change from the norm.

Retail price of the IsoTek Aquarius Evo3 as detailed here is circa £1,200.00.

Sound Quality

Or rather, how it doesn't sound. The sound quality heard through my Hi-Fi system wasn't directly attributable to the IsoTek Aquarius itself, more the profound effect it had on the performance of the other components attached to it and allowing them to work unhindered by mains borne pollution. Because of that the “Sound Quality” rating I have given at the end of the review is only a notional figure, as it should be by rights much higher if it was a standalone sound producing component, as opposed to affecting other components in the chain as mains conditioners are wont to do. Even so, it is still given a 9.1 out of 10 rating, a more than respectable scoring nonetheless, given the context of it's function.

The Aquarius was tried with 3 different amplifiers; a valve amplifier, an all digital amplifier and a conventional transistor output amplifier, plus two CD players too, so all of them benefited immensely from the cleaned up mains supply it provided, so practically any device should derive gains from using the conditioner in the system.

Background became totally silent, with not even the tiniest amount of hiss when the amplifier's volume was cranked up to maximum, whereas it was there before the Aquarius was introduced. I heard no hums or buzzes either.

Of course, part of my brief was to analyse whether or not the Aquarius was compressing any of the dynamics and I would be paying particularly close attention to that, given my previous experience with other mains conditioners. Pleased to report that I couldn't detect any compression effects at all, in fact the system was even more dynamic than hitherto without the Aquarius being installed and never once felt that it was running out of available power at any time.
The sound just opened up and flowed with absolute ease from the speakers, fine details had acquired a polished refinement, presented in an endless stream of new found details, so it was no effort at all to hear all of the tiny nuances in the recording without having to strain to hear them. Bass too acquired a palpable firmness and solidity without any trace of boom or overhang at all. Drums and bass were immense in scale yet under perfect control at all times. Of particular note however was the sound stage and imaging which really was holographic in every sense of the word and it was effortless in placing musicians and instruments into fixed points in space with an ethereal quality to them, being surrounded and enveloped by an inky blackness. In short, I believe the IsoTek Aquarius simply unshackled my system and let it do what it does best, forming a perfect symbiotic partnership.

**Conclusion**

So, would you feed that thoroughbred race horse with carrot tops and potato peelings? Would you fill up a Formula 1 car with supermarket petrol? No you wouldn't answer 'yes' to either of those questions and the same goes too for your Hi-Fi system with the mains quality you feed it.

I will say it again so there is no doubt, I believe a mains conditioner is an essential component and provided the conditioner you choose doesn't compress or curtail the dynamics and lets the music flow out your system without any hiss, hash, mush, or extraneous noise in effortless and untroubled ease, then the outlay is worthwhile in sound quality gains. On that basis, the IsoTek Aquarius Evo3 easily meets all of those important performance criteria and I am convinced that IsoTek have also sprinkled some “Ingredient X” in there as well, because it performed for me way better than I had expected it to, comfortably beating my long term resident mains conditioner with aplomb.

Therefore I give the IsoTek Aquarius Evo3 mains conditioner an unequivocal recommendation.

**Build quality:** 8.9/10  
**Sound quality:** 9.3/10  
**Value for money:** 9.1/10  
**Overall:** 9.1/10  

**Recommended for:** Any Hi-Fi system, enabling it to perform at its best.

**Dominic Marsh**

**As is customary with Hifi Pig, whenever a product scores 8.5 or more then a second review is called for, so after Dominic’s scoring ratings, it was handed over to Dan Worth for him to conduct the follow up review.**

I've had many mains products in my time, ranging from simple basic to more complex filters and conditioners, regenerators, balanced power transformers and isolation transformers.

What I look for in a mains routing system is a unit that imposes no sonic signature on the sound and simply allows the equipment to work closer to its full potential. The Aquarius is a product that gets a tick from me.

The unit is extremely well made, has a substantial aluminium case and great looks to match. Available in various socket output types it will cater for all, regardless of plug choice or country of origin.

In the box, accompanied with the unit is an EVO3 Premier mains cable with gold plugs, an extremely welcome addition over a stock throw away cable which comes with most units regardless of price.

I ordinarily use Schuko sockets so a quick change over to some MS HD Power plugs and the Aquarius was easily swapped into my system and fired up ready to go.

My initial take on the sound was very pleasant and music seemed to be able to breathe very well indeed giving a spacious and 3D soundstage with a black background listened for an hour or so until I had other things to take care of that day and anticipating an even better result from the unit later that evening once it had the time to settle in and warm up etc.

Later that evening I returned to the music and played some acoustic material I was very familiar with. I can't really say that I felt the sound was much better than earlier the same day. The sound was spacious and engaging, the soundstage was definitely carved out from the black background and a sense of effortless prowess was a stand out feature of the Aquarius in my system, easily giving the impression that the...
ISOTEK AQUARIUS EVO 3 MAINS CONDITIONER

The Aquarius offers no sonic signature of its own, simply put it will allow the system components to work much more towards their full potential, allowing for better sound staging a quieter background and more ease, control and strength to the overall sound.

Dan Worth