

Unto the pure

Tony Bolton tries out IsoTek's new Sigmas EVO3 mains purifier and is stunned by the results.



I have been using a GII IsoTek Sigmas mains purifier on my upstairs system since it came on the market, and I was surprised to discover that this was some 8 years ago. Technology, and our usage of it moves on and the Sigmas has been updated, now called the Sigmas EVO3.

Similar in size to the previous

model this new version has redesigned casework which features a screen on the front panel that houses three buttons. The left one causes the incoming mains voltage to be displayed, the right shows the percentage of distortion that is detected on the incoming mains supply, and the centre one switches off the display.

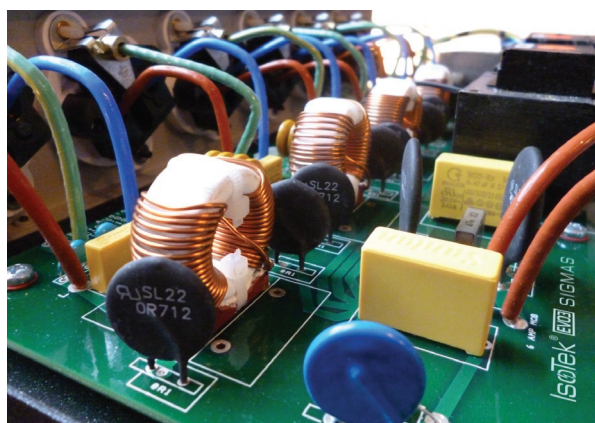
The only other controls are two switches mounted underneath at the front which provide power to the two high power (16 Amp) output sockets situated at the back left hand side, and the four lower power (10 Amp) sockets that occupy most of the rest of the back of the unit. The IEC mains input socket is also at the back on the left. An IsoTek EVO3 Premier power cable is provided.

IsoTek are understandably cautious about revealing too much of what is going on inside the Sigmas EVO3 but provided a block diagram to explain the circuit. Most of this is self explanatory and features the "Direct Coupled" technology from the Company's high power Titan purifier and the "Adaptive Gating" from the Nova, which is optimised

for source components. The former is claimed to provide optimal high current, low impedance filtering to maintain transient and dynamic performance from amplifiers and subwoofers, while the latter auto senses and adapts the current draw through the lower power sockets to the demands of the load plugged into it.

A new technology for the EVO3 series is KERP (Kerchoff's Equal Resistance Path) which ensures equal resistance and power delivery to all sockets. None of these are connected to another to avoid cross contamination of the power feed and each has its own dedicated filter network.

The internal wiring uses IsoTek's newly developed Ultra Pure - Ohno Continuous Cast copper, solid core internal wiring. This is silver plated before being insulated with Teflon. A fine Teflon strand is wound helically around the wire before a secondary Teflon tube is extruded over the top. This provides an air dielectric with virtually no capacitance. The printed circuit board uses 24 carat gold-plated 2oz copper. Power surges and



Normally the internal components of an IsoTek product are covered over but the Company have kindly let us have this internal shot to give some idea of how the inside looks, without giving away any trade secrets.

spikes are catered for with a claimed 108,000Amps of instantaneous protection via a pyramid array of voltage dependent resistor devices.

From the moment I plugged this device in, replacing the GII version, it was apparent that the Sigmas EVO3 was a bit special. It seemed as though my entire system had received a major adrenaline shot, with a sense of power and control over the music that was akin to a substantial system upgrade.

I discovered a whole new layer of low bass that had only previously been hinted at. Saint- Saens Organ Symphony sounded truly majestic

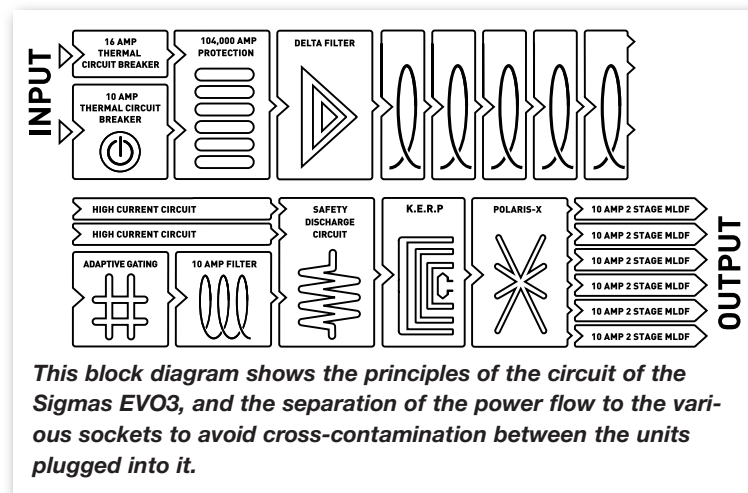
“.. with a weight to the lower notes that was made of pure granite, yet seemed to have the agility of an Olympic athlete.”



The two sockets (16Amp) in the red coloured area are for high power components such as amplifiers, while source components use the four lower power (10Amp) sockets in the black section. The IEC mains input is on the left."

with a weight to the lower notes that was made of pure granite, yet seemed to have the agility of an Olympic athlete. Mid and upper band sounds gained in colour, texture and definition, so the complex section towards the end of the second movement, where the orchestra, organ and pianos combine, had a clarity that I have never heard through this system.

Gentler sounds from the Everly Brothers LP 'Beat And Soul' were very well described with a space around the voices that helped the imaging appear nearly three dimensional. Since this is a mono recording I found this level of air and definition to the sound very impressive. The opening track, a cover of Mickey and Sylvia's 'Love Is Strange', had a throbbing beat below the guitars and vocals that drove the music along effortlessly, leaving the vocal harmonies floating through the air.



that the Sigmas was surprisingly close to the bigger unit in perceived performance. The Titan was still better, but the performance gap had narrowed considerably.

Often a new version of a product offers improvements over the previous design but not enough to warrant current owners upgrading. This is one occasion where owners of the GII version will find such substantial benefits from upgrading to the EVO3 model that the financial outlay can be fully justified. Whether you use it in an audio or AV system, the improvements in every aspect of that equipment's performance are so obvious that it is a complete 'no-brainer'. This product is truly awesome in the effect it has upon a system and can be regarded as an essential purchase.

SYSTEM USED

Linn Sondek/ Hadcock 242 Cryo/
Clearaudio Concept MC.
Luxman E200 phonostage.
Townshend Allegri pre-amp.
2 x Quad 303 power amps.
Kelly KT3 loudspeakers.

MUSIC USED

Saint-Saens. 'Symphony No.3 in C minor, Op. 78. "Organ Symphony". Chicago Symphony Orchestra conducted by Daniel Barenboim. Gaston Litaize, Organ. Deutsche Grammophon Records. 2530 619. 1976.

The Everly Brothers. 'Beat And Soul'. Warner Brothers Records. W 1605. 1965.

ISOTEK SIGMAS EVO3 £2295.00



OUTSTANDING - amongst the best

VALUE - keenly priced

VERDICT

A mains purifier that offers a truly stunning improvement in performance over the previous model that more than justifies its price.

FOR

- wider perceived bandwidth
- improved dimensionality and imaging
- deeper colours and textures of visual images

AGAINST

- absolutely nothing

IsoTek Systems
www.isoteksystems.com



Watt's up?

If you're looking for a performance boost without the box swapping risks, **Ed Selley** thinks IsoTek could have just the solution

The business of upgrading a system that has a synergy between components can be a slightly fraught experience. Even when you stay with the same manufacturers, the arrival of a new product can throw a previously happy relationship between existing products out of line. This can then demand further updates to cure and in some unhappy instances, leave you wishing you hadn't bothered. Equally, if you want a performance boost, you have to look at swapping a component out – or do you?

IsoTek has been in the business of providing another upgrade option since 2001. The company focuses on

the mains supply that a system receives and seeks to improve the quality of the electrical current your system takes in to assist with performance. This is focused on the removal of mains-borne interference. Depending on how power lines are rigged in your corner of the world, your power supply can find itself infested with electromagnetic and radio frequency interference. Even once it reaches your home, the proliferation of Ethernet over mains devices, baby monitors and white goods can throw a great deal of noise back onto your mains.

The Evo 3 Sigmas is actually a combination of two IsoTek

DETAILS

PRODUCT
IsoTek Evo 3 Sigmas

ORIGIN
UK

TYPE
Mains conditioner

WEIGHT
10kg

DIMENSIONS
(WxHxD)
444 x 85 x 305mm

FEATURES

- Quoted power output: 3,680W (high current) and 2,300W (low current)
- Six output sockets

DISTRIBUTOR
Sound Foundations

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components – the Titan, which is designed for power amplification and the Nova optimised for source equipment. These functions are cut down in the Sigmas, but when you take into account what the Sigmas can do, this is more a reflection that the Titan and Nova are determinedly over specified than any sense of cost cutting in the Sigmas. As such, the Sigmas is fitted with six mains sockets. Two of these are intended for high-voltage applications such as power amplifiers, while the other four cater for source equipment.

The amount of power the Sigmas disposes of to do this is impressive. The two high-voltage sockets have a total of 3,680W available to them while the four low-voltage ones have a total of 2,300W on tap. As such, even though the Sigmas is very much in the centre of the IsoTek range, it can handle some distinctly high-end power requirements. The other arresting number from the specifications comes in terms of protection. By using an array of voltage-dependent resistors, it offers 108,000A of protection against surges, spikes and other nastiness.

The figures are certainly impressive, but there is so much more than just brute force to the design. Perhaps the most important aspect of the Sigmas – and certainly one that matters to the overall performance – is that it is made up of six individual filters. There is no connecting wiring between the sockets and each one has a dedicated filter network. This means that even if you have a component with some decidedly

That display can be bright, but it can be turned off

dubious behavioural characteristics connected to the IsoTek, those characteristics shouldn't have an adverse affect on anything else. Internally, it is wired with high-purity copper wiring while the circuit boards make use of gold-plated copper connectors for optimal signal transfer.

This attention to detail extends to the outside of the product, too. The Sigmas is finished to a standard that is extremely good even at the asking price. The casework is solid, exactly assembled and – as much as a power conditioner ever can be considered attractive – aesthetically pleasing with a clean and uncluttered appearance. The only slightly discordant note is the display that will either show watts being supplied or the total percentage of total power that the Sigmas is delivering. This is clear and easy to read, but also extremely bright. With the lights off in the listening room, the effect brings to mind an alien abduction and while it can be switched off, it can't be dimmed which is a little irritating, but not the end of the world.

This is perhaps the only design curiosity in an otherwise very well thought out product. As someone that has used an Evo 3 Aquarius for some time now, one of the most useful tweaks to the Sigmas is that the mains sockets are now at a 45° angle, which makes the 'flow' of cables out the back much easier than the 12 o'clock arrangement of the Aquarius and makes the installation of the Sigmas simplicity itself.

This ease of installation means that the performance of the system in question – a Naim Supernait 2 integrated amp, ND5 XS streamer with XP5 XS power supply, Arcam airDAC and Michell Gyrodec with Avid Pellar Phono stage – goes in with minimal fuss. Given the care Naim lavishes on its power supplies, particularly the external ones, I am

interested to see what the IsoTek can bring to a system of this nature.

Sound quality

The good news is that the impressive technical specification of the Sigmas translates into performance gains and the really good news is that none of these gains change the basic character of the system. The Naim electronics keep their powerful, slightly dark presentation and the excellent detail retrieval takes another step forward as noise levels that were already low simply drop away to nothing. The bass response was never an area I felt

If you are looking for a wholesale boost to your system, the Evo 3 Sigmas is it

short changed in, but now it has a little extra speed and agility over and above what it had before. Soundstage is not a concern of the Naim sound, but the Sigmas manages to create a sense of space to the performance that opens the presentation out without losing the sense of focus and drive that the system excels at. The effect is uncannily like the strapline for Berocca vitamin tablets – my system, but on a really good day.

One of the more unusual aspects of the Sigmas is that the improvements don't seem to negate the effects of other power products. When connected directly to the IsoTek, the ND5 XS streamer is unquestionably better than when hooked up to the mains, but connecting the XP5 XS power supply back up still reaps the benefits that it does when the Sigmas isn't used, and removes almost any sense of 'digital' to the presentation. This does mean that if you are unhappy with an aspect of your



Q&A

Keith Martin

General manager, IsoTek Systems



ES: Is there a cut-off rule of thumb for best use of the high voltage outputs over the low voltage ones?

KM: The question of high current and medium current isn't just power consumption, it is how that power is consumed. For example a plasma will draw continuous current, thus the circuit would be different to that of a power amp (not class A), which needs to gulp current when the music is dynamic. So it's also a question of high-current and low impedance.

The medium-current side of the Sigmas auto adjusts to the load, so if you were to place a CD player (30W typical) next to a projector (300W typical) the circuit would auto adjust to give the best filter environment.

Is there a system price point where you would recommend the Sigmas over the Aquarius and Solus?

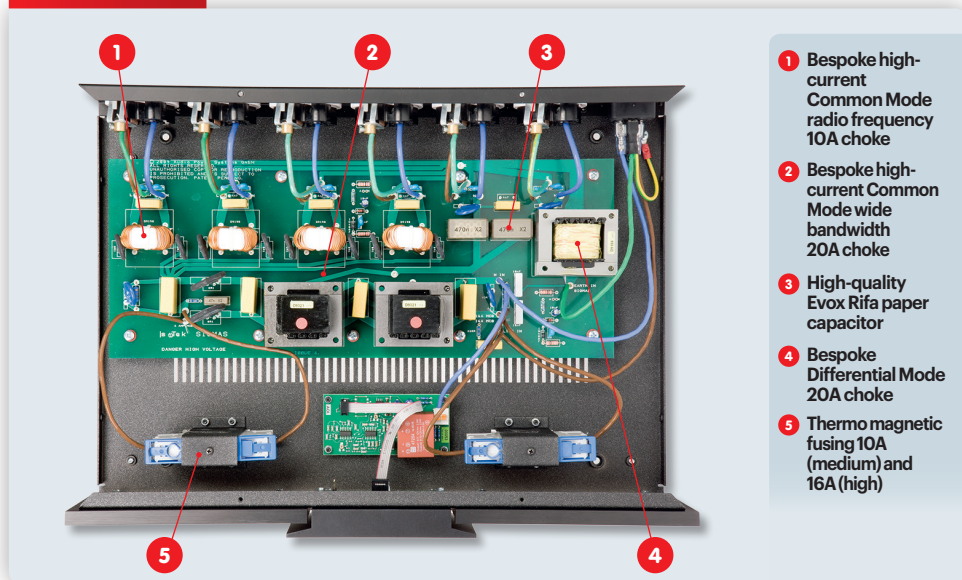
This is always a contentious question. We say between 10-20% of a system's value, however in some demos we've put in power conditioning systems costing double that of the system's value, and the system sounds more than twice as good!

But we'd say you're probably getting 80% of system potential without considering a good, properly designed (for purpose – for audio usage) power cleaning solution. It's similar to purchasing a sports car and not thinking about the road on which you drive it. Logic states driving it on grass won't be as good as flat tarmac!

With the changes to what we connect to the mains, are there best practice principles to follow?

The basic problems of common mode, and differential mode noise are always there. We have increased challenges by the increased use of Class D power supplies that disrupt the mains more (differential mode). The use of more and more electrical appliances in our homes. The use of wi-fi in our homes (common mode), some companies offer products to boost wi-fi signal by turning your ring main into a giant aerial – nice for common mode and RFI. Products will be released to deal with this, which will be backwards compatible with existing IsoTek systems.

IN SIGHT



- 1 Bespoke high-current Common Mode radio frequency 10A choke
- 2 Bespoke high-current Common Mode wide bandwidth 20A choke
- 3 High-quality Evox Rifa paper capacitor
- 4 Bespoke Differential Mode 20A choke
- 5 Thermo magnetic fusing 10A (medium) and 16A (high)

system's performance, the Sigmas is unlikely to correct it and could theoretically exacerbate it – although in this case you'd surely be looking to change the equipment in question before you think of adding a product of this nature.

The other trait of the Sigmas that might be worth taking into account is that while I feel devices that run at standard mains voltages benefit quite considerably from its addition, I am less convinced the benefits on low voltage 'wall wart' type products are as clear cut. The Arcam airDAC I use mainly to allow streaming of the Tidal service to the system doesn't seem to show the same benefits as the main streamer. It certainly doesn't get any worse, but the performance is fairly consistent across connection to a standard mains gantry and the IsoTek. Neither is this limited to the Arcam. The Chord Hugo also behaves in much the same way (although as there are batteries in the Chord, this is less surprising). Given systems that run on lower overall voltages are popping up at higher price points, this might be something to take into account before choosing one.

The news for equipment that uses higher voltages is almost exclusively good, however, and even when the current demands are not very high – the Avid Pellar barely registers on the voltage consumption display – the benefits are immediate and effectively viceless. Neither are they limited to audio. Some tests with a Panasonic plasma TV (which is habitually connected to the Aquarius conditioner) see a small but useful drop in picture noise when connected to the Sigmas, which means that if

you have sockets going spare on your IsoTek, other bits of AV equipment will benefit from it.

Conclusion

The Sigmas is not a magic bullet product. It won't correct glaring errors in the way a system performs and there are conditions – both in terms of product design and your location – where its impact will be lessened, but this should not take away from what it does. If you have a system that performs in the way you want it to and you want to try and make it better, the Sigmas delivers in spades. There are very few products that can deliver improvement across the board to a multiple unit system, but this is very definitely one of them. It is able to wring that little bit more out of a system and given its transparency and immense current delivery should be able to handle a few upgrades if you do decide to push the system further in the future. If you are looking for a wholesale boost to your system, you've just found it ●



The Sigmas is most closely competitive with the Isol-8 SubStation (reviewed HFC 344) and both products go about trying to achieve the same role and offer similar functionality. The Sigmas is less expensive than the Isol-8 and the single chassis design is more convenient in terms of placement. Both units are well finished, but the consumption display of the IsoTek, while a little bright is a useful feature to have. Both products have similar provisos in terms of what they can and can't do, but the IsoTek looks like the better value option in this context.

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



VALUE FOR MONEY



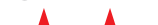
BUILD QUALITY



FEATURES



OVERALL



LIKE: Offers a boost to performance without changing character

DISLIKE: Less effective on some low-voltage components

WE SAY: This is a tremendously effective and very well implemented mains treatment system