



# Isotek®

The power to perform

## Power Evolved



Isotek VS SIGMA S

Isotek VS SIGMA S

# Introducing IsoTek

**IsoTek is an English company making award-winning power optimisation products for hi-fi and home cinema systems.**

Our highly specialised mains conditioners actively clean the power obtained from your wall sockets before it reaches your hi-fi or audio visual system, and our range of power cables further enhance this improvement. Our solutions cover a wide range of systems, delivering significant upgrades in performance at competitive prices.

IsoTek products are enjoyed by more than 100,000 customers in over 55 countries, and have earned numerous accolades from specialist audio and AV publications worldwide.

We are recognised as the leader in clean-power technology, a fact reinforced by the highly respected consumer electronics brands that have used IsoTek in the development and demonstration of their products, including Arcam, Denon, Genesis Advanced Technologies, Innuos, Kerr Acoustic, Marantz, Monitor Audio, Nordost, Onkyo, Pioneer, PMC, Primare, Roksan and TEAC Esoteric.

All IsoTek products are designed for purpose, manufactured in Europe and built to last.



Thermal imaging camera to manage heat dissipation



High quality Audio Precision test equipment



IsoTek undertakes extensive A/B listening tests



IsoTek production of the award winning EVO3 Polaris

## Our History

**IsoTek was born with a singular aim: to create a better solution to the problem of poor mains quality, which restricts the performance of audio systems, through rigorous research and genuine innovation.**

Today, our products supply clean, fully optimised power to all manner of audio and AV equipment, from amps and source components to TVs and projectors, enhancing performance and protecting valuable equipment.

The company's founder and managing director is Keith Martin (pictured), a man whose vision has led to hundreds of awards from respected audio critics worldwide.



**Keith Martin**  
Founder & Managing Director

*"IsoTek treats mains-related problems with a seriousness that has to be seen and heard to be believed"*

**HI-FI WORLD**

*"IsoTek is the leader in mains conditioning products"*

**HI-FI NEWS**

*"IsoTek is the UK's biggest name in mains filtration"*

**HI-FI CHOICE**

*"IsoTek gets (understands) power, so it's logical that IsoTek is the go-to company for power"*

**HI-FI+**

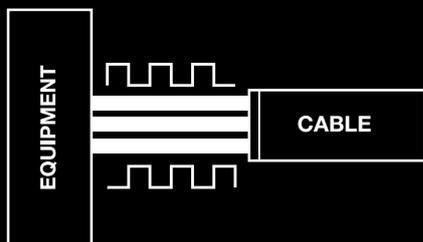
# Clean Power, Pure Sound...

The first input into any audio or AV system is electricity. It flows through the system, utilised by each component in turn to create the signal that eventually moves the speakers' drive units or delivers the pixels on-screen. What we see and hear is ultimately fashioned from, and by, mains electricity – it is the 'raw material' from which the 'art' is created.

The mains supply is distorted by numerous factors as it travels from power stations to be distributed throughout our homes, eroding the performance of high-quality audio and AV systems. As the electronic devices we use proliferate and the demand for electrical power intensifies, the quality of the electricity we feed our systems continues to slide.

The escalation of mains-borne 'noise' means that the need for IsoTek's clean-power technology has never been greater. 'Differential mode noise' is especially exacerbated by the switch-mode power supplies that are common in many modern devices, from computers to kitchen appliances. 'Common mode noise' is ever-increasing thanks to wireless networking in the home, with mobile phones, wi-fi and Bluetooth bathing us in a sea of airborne interference.

The quality of electricity we feed our audio and AV systems has a profound effect on performance, and that's where IsoTek's unique clean-power solutions come in. Without IsoTek, you are only accessing around 80 per cent of your system's full potential, at best.



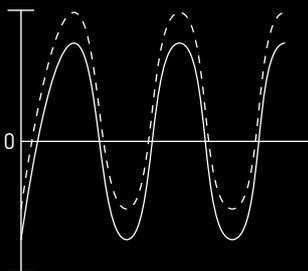
## DIFFERENTIAL MODE

Differential Mode mains noise is created by all electrical appliances – everything with a power supply, in fact. This includes your microwave oven, your television and your computer, as well as every hi-fi component you own.

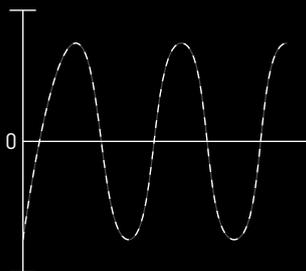


## COMMON MODE

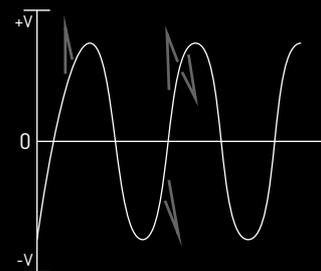
Common Mode mains noise is often referred to as RFI – transmitted frequencies that surround us but we cannot see. For example, imagine how much data is transmitted by smartphones and tablets; cheap power cables act as aerials for these unwanted frequencies.



Mains sine wave off set  
(DC on the mains)



Corrected mains sine wave



Power surge and mains  
spike protection system

# Awards and testimonials

THE DISCOVERY SERIES

## V5 POLARIS

**i-fidelity.net**

IsoTek V5 Polaris  
Testurteil: sehr gut

"Anyone who relies on IsoTek is doing everything right from the start."

**I-fidelity**, November 2022

**i-fidelity.net**

**Preistipp**

THE DISCOVERY SERIES

## V5 CORVUS



"..the reproduction has more transparency and details, greater plasticity and spatiality, better dynamics and greater precision, more volume especially in the bass and overall increases in coherence and relaxation."

**Lite Magazin**, September 2022

THE DISCOVERY SERIES

## V5 ELEKTRA



"To further improve performance on an almost perfect system is extremely difficult. However, IsoTek V5 Elektra proved that it play an important role to the system, doesn't matter it's a Wireless Loudspeaker- or a High End System, sonically V5 Elektra is very neutral didn't add any coloration to the sound. Highly recommended!"

**Audiotechnique** - January 2023



"The IsoTek V5 Elektra needs no apologies or excuses; you plug it in, you hear what it does, you buy it."

**Hi-Fi+**, September 2022



"Using the V5 Elektra ensures a clean, dynamic and neutrally balanced sound image."

**HiFi IFAs**, July 2023

**i-fidelity.net**

**Tuning-Tipp**

"In other words, IsoTek's V5 Elektra is a perfect, affordable solution."

**I-fidelit**, September 2022

THE PERFORMANCE SERIES

## V5 SIRIUS



"we are also aware of positive sonic effects of this magnitude from other mains filters, but never before has there been this result with a three-digit price tag."

**I-fidelity**, April 2023



"..the common belief that a power filter will choke your dynamics didn't seem to apply here. On the contrary, the bass even gained punch, and the brass instruments definitely increased in details and intensity. Overall, the recording felt "awakened", more alive and diverse."

**HiFi Voice**, June 2023

THE PERFORMANCE SERIES

## V5 AQUARIUS



"V5 Aquarius not only had the ability to protect your equipment, and it clean up the dirty mains electricity but most importantly, it doesn't alter the equipments tonality's characteristics.... We believe V5 Aquarius has a high chance to be the 'Hot Item' of the 2022."

**Audiotechnique**, January 2022



"Power conditioner of the year."

**Lite Magazin**, February 2023



"..the IsoTek Aquarius V5 .. has noticeably improved the performance of my hi-fi system. Recommended - Reference Class."

**Lite Magazin**, October 2022



"The V5 improved on the EVO3 in each area of performance, and then went further, it drew the sound together in the way only the very finest of this type of product can."

**Hi-Fi+**, October 2021



"Time-consuming i-fidelity.net tests show that the V5 Aquarius is audibly more effective than its predecessor. Sound quality: outstanding"

**I-fidelity**, October 2021



"The V5 improved on the EVO3 in each area of performance, and then went further, it drew the sound together in the way only the very finest of this type of product can."

**Hi-Fi+**, October 2021

THE SELECT SERIES

## V5 TITAN



"V5 Titan improves upon that performance in every way. Once you've (not) heard it working, it's hard to go back."

**Hi-Fi+**, December 2022

THE DISCOVERY SERIES

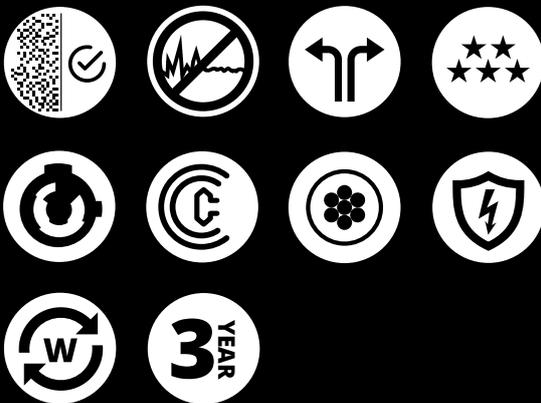
# V5 GEMINI

The V5 Gemini is the fully updated version of our compact award-winning EV03 Polaris, featuring just two output sockets rated at 10A. Gemini is a cost-effective upgrade designed for simple two box audio or audio-visual systems or as a means to extend power outlets from other IsoTek products using the new System Link outlet which maintains a fully 'Star Earthed' supply.



## TECH ICONS

explained on pages 23-27



## Available outlets



## Specifications

<b>NUMBER OF OUTLETS</b>	x2 + System Link
<b>TYPE OF OUTLETS</b>	UK, EU, US, AU & CH
<b>SYSTEM LINK</b>	x1
<b>MAINS INLET</b>	10A IEC C14
<b>MAINS VOLTAGE</b>	100-240V / 50-60Hz
<b>MAXIMUM CURRENT</b>	10A HRC
<b>TOTAL WATTAGE</b>	2'300W (@230V) / 1'150W (@115V)
<b>SURGE PROTECTION</b>	45'000A
<b>DIMENSIONS (W x H x D)</b>	80 x 50 x 270mm
<b>WEIGHT</b>	0.7Kg



## FEATURES

Suitable for all audio or AV systems

RFI reduction 35dB

Central clean power network removes Common and Differential Mode mains noise

2 independent outlets stop Differential Mode cross contamination

45'000A instantaneous protection

Fully star-earthed network

Multi-strand 6n OFC silver-plated internal wiring with FEP dielectric

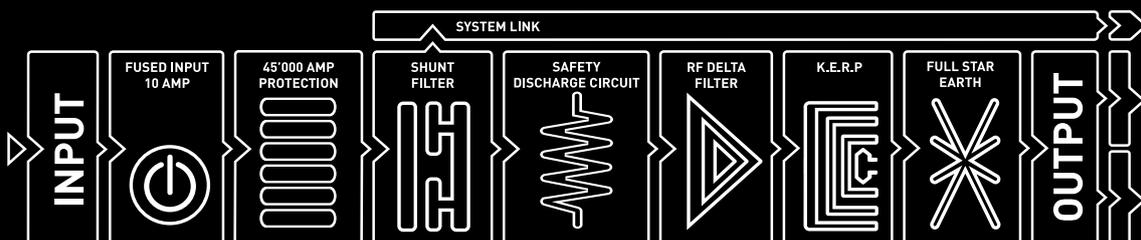
**SYSTEM LINK** outlet for extending the outlets and maintaining a starred earth reference

Use with standard IEC C13/C15 power cable

UK, EU, US, AU & CH outlets available



## Schematic block diagram



THE DISCOVERY SERIES

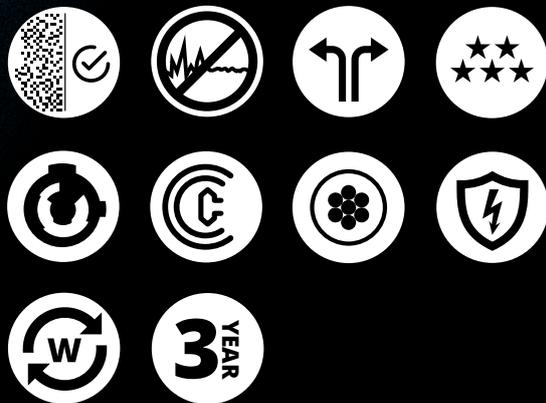
# V5 POLARIS

Your chance to enter IsoTek's innovative and multi award-winning range of power line cleaning solutions. The new V5 Polaris offers nine times more Differential Mode filtering, improved amperage with decreased resistance along with a 60% improved Direct Current Resistance. Protection is also doubled in this new model. V5 Polaris represents the most cost effective upgrade to any audio or audio-visual system, delivering improved performance and protection. It is astonishing value for money.



## TECH ICONS

explained on pages 23-27



EV03 Initium cable is included with the V5 Polaris

## Available outlets



## Specifications

<b>NUMBER OF OUTLETS</b>	x6 + System Link
<b>TYPE OF OUTLETS</b>	UK, EU, US, AU & CH
<b>SYSTEM LINK</b>	x1
<b>MAINS INLET</b>	10A IEC C14
<b>MAINS VOLTAGE</b>	100-240V / 50-60Hz
<b>MAXIMUM CURRENT</b>	10A HRC
<b>TOTAL WATTAGE</b>	2'300W (@230V) / 1'150W (@115V)
<b>SURGE PROTECTION</b>	45'000A
<b>DIMENSIONS (W x H x D)</b>	80 x 50 x 510mm
<b>WEIGHT</b>	1Kg
<b>DELIVERED WITH CABLE</b>	EVO3 Initium



## FEATURES

Suitable for all audio or AV systems

RFI reduction 35dB

Central clean power network removes Common and Differential Mode mains noise

6 independent outlets stop Differential Mode cross contamination

45'000A instantaneous protection

Fully star-earthed network

Multi-strand 6n OFC silver-plated internal wiring with FEP dielectric

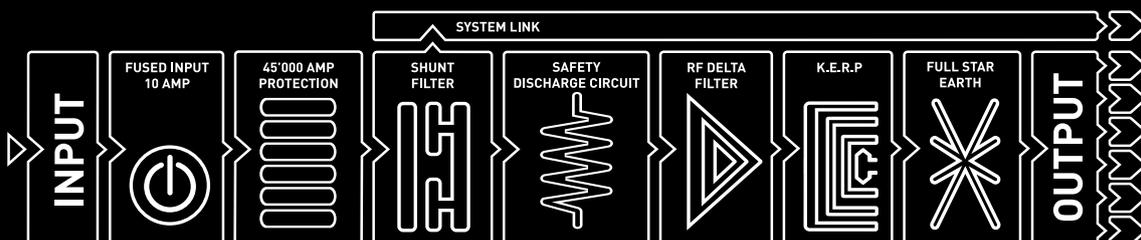
**SYSTEM LINK** outlet for extending the outlets and maintaining a starred earth reference

Supplied with IsoTek **EVO3 INITIUM POWER CABLE**

UK, EU, US, AU & CH outlets available



## Schematic block diagram



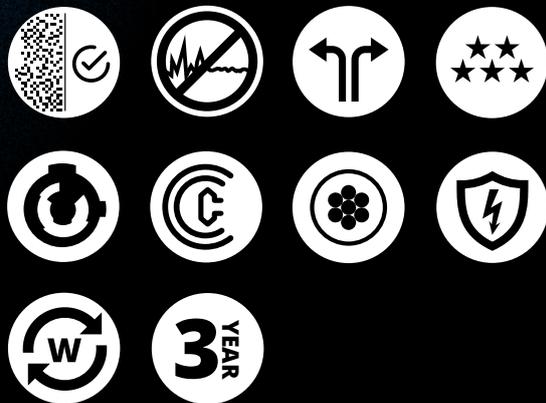
THE DISCOVERY SERIES

# V5 CORVUS

V5 Corvus is an evolution of IsoTek's award winning Polaris design, reconfigured to feature nine output sockets. It is a cost effective upgrade to any audio or audio-visual system, delivering improved performance and protection as well as being great value for money. Corvus can be easily wall mounted behind your audio system.



**TECH ICONS**  
explained on pages 23-27



EV03 Initium cable is included with the V5 Corvus

## Available outlets



## Specifications

<b>NUMBER OF OUTLETS</b>	x9 + System Link
<b>TYPE OF OUTLETS</b>	UK, EU, US, AU & CH
<b>SYSTEM LINK</b>	x1
<b>MAINS INLET</b>	10A IEC C14
<b>MAINS VOLTAGE</b>	100-240V / 50-60Hz
<b>MAXIMUM CURRENT</b>	10A HRC
<b>TOTAL WATTAGE</b>	2'300W (@230V) / 1'150W (@115V)
<b>SURGE PROTECTION</b>	45'000A
<b>DIMENSIONS (W x H x D)</b>	170 x 50 x 380mm
<b>WEIGHT</b>	2Kg
<b>DELIVERED WITH CABLE</b>	EVO3 Initium



## FEATURES

Suitable for all audio or AV systems

RFI reduction 35dB

Central clean power network removes Common and Differential Mode mains noise

9 independent outlets stop Differential Mode cross contamination

45'000A instantaneous protection

Fully star-earthed network

Multi-strand 6n OFC silver-plated internal wiring with FEP dielectric

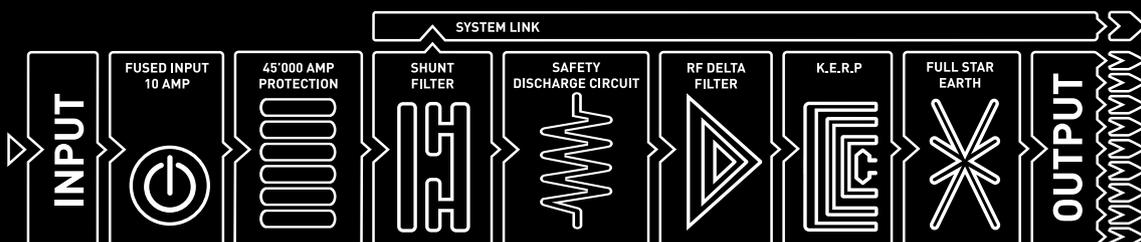
**SYSTEM LINK** outlet for extending the outlets and maintaining a starred earth reference

Supplied with **ISOTEK EV03 INITIUM POWER CABLE**

UK, EU, US, AU & CH outlets available



## Schematic block diagram



THE DISCOVERY SERIES

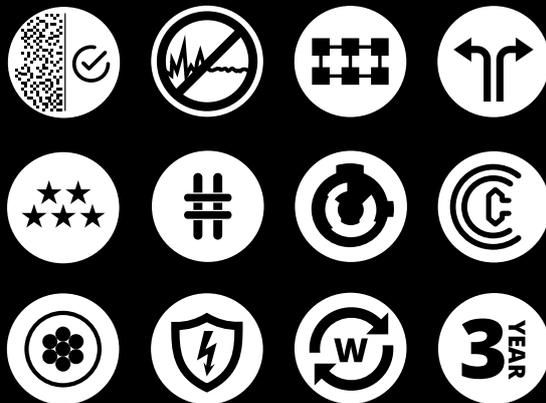
# V5 ELEKTRA

The V5 Elektra brings IsoTek's legendary multiple and individual power cleaning networks dedicated for each outlet to a new lower price class. V5 Elektra therefore has to be the most cost-effective power cleaning upgrade money could buy. The new V5 model has instant on tap power, direct current resistance is close to the ideal of zero Ohms. The protection rating is four times the minimum requirement, raised to 67'500A instantaneous. This six-way mains power-cleaning is essentially six power cleaning systems in one box!



## TECH ICONS

explained on pages 23-27



EV03 Initium cable is included with the V5 Elektra



## Available outlets



## Specifications

<b>NUMBER OF OUTLETS</b>	x6 + System Link
<b>TYPE OF OUTLETS</b>	UK, EU, US, AU & CH
<b>SYSTEM LINK</b>	x1
<b>MAINS INLET</b>	10A IEC C14
<b>MAINS VOLTAGE</b>	100-240V / 50-60Hz
<b>MEDIUM CURRENT - 230V</b>	x4 (5A 1'150W total)
<b>MEDIUM CURRENT - 115V</b>	x4 (5A 575W total)
<b>HIGH CURRENT - 230V</b>	x2 (10A 2'300W total)
<b>HIGH CURRENT - 115V</b>	x2 (10A 1'150W total)
<b>SURGE PROTECTION</b>	67'500A
<b>DIMENSIONS (W X H X D)</b>	450 x 106 x 350mm
<b>WEIGHT</b>	9,0kg
<b>DELIVERED WITH CABLE</b>	EVO3 Initium
<b>AVAILABLE COLOURS</b>	Black & Silver

## FEATURES

Suitable for all audio or AV systems

RFI reduction 55dB

6 optimised power cleaning circuits to effectively remove Common and Differential Mode mains noise

4 independent outlets for source components (5A)

2 independent high current outlets for power amps, active subwoofers, active speakers etc. (10A)

Easy replacement fusing system

67'500A instantaneous protection, 32'500A continuous

Fully star-earthed network

6n oxygen free copper silver-plated internal wiring with FEP dielectric

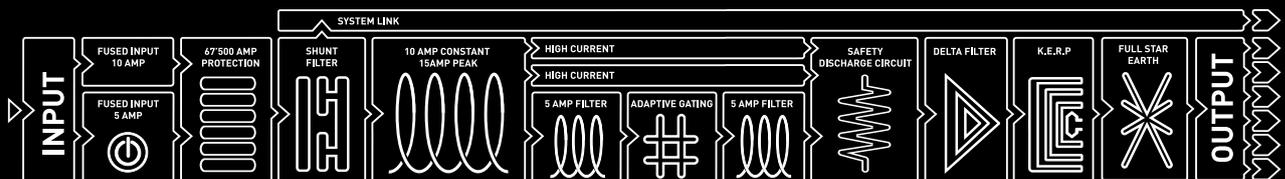
**SYSTEM LINK** outlet for extending the outlets and maintaining a starred earth reference

Supplied with **ISOTEK EV03 INITIUM POWER CABLE**

UK, EU, US, AU & CH outlets available



## Schematic block diagram



THE PERFORMANCE SERIES

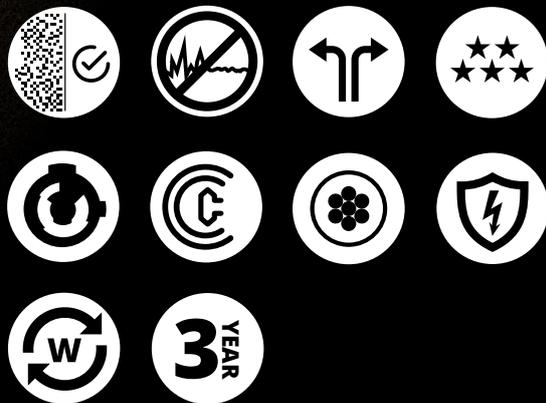
# V5 SIRIUS

The new V5 Sirius is an ultra-high performance 16A power bar, harnessing IsoTek's latest mains power cleaning technology, which both protects and improves your audio systems performance. If more power output sockets are required a unique IsoTek 'System Link' connector is provided, this allows you to connect multiple IsoTek units together whilst maintaining star-earth. In addition, an easy resettable fusing system offers a substantial upgrade over a standard ordinary glass fuse due to an increased contact area.



## TECH ICONS

explained on pages 23-27



EV03 Premier cable is included with the V5 Sirius

## Available outlets



## Specifications

<b>NUMBER OF OUTLETS</b>	x6 + System Link
<b>TYPE OF OUTLETS</b>	UK, EU, US, AU & CH
<b>SYSTEM LINK</b>	x1
<b>MAINS INLET</b>	16A IEC C20
<b>MAINS VOLTAGE</b>	100-240V / 50-60Hz
<b>MAXIMUM CURRENT</b>	16A HRC
<b>TOTAL WATTAGE</b>	3'680W (@230V) / 1'840W (@115V)
<b>SURGE PROTECTION</b>	54'000A
<b>DIMENSIONS (W x H x D)</b>	88 x 55 x 555mm
<b>WEIGHT</b>	2Kg
<b>DELIVERED WITH CABLE</b>	EVO3 Premier
<b>AVAILABLE COLOURS</b>	Black & Silver



## FEATURES

Suitable for all audio-, AV-, or network based systems

RFI reduction up to 60dB

Central clean power network removes Common and Differential Mode mains noise

6 independent outlets stop Differential Mode cross contamination (16A)

54'000A instantaneous protection

Fully star-earthed network

Multi-strand 6n OFC silver-plated internal wiring with FEP dielectric

Easy reset fusing system

Wall mounting bracket kit included

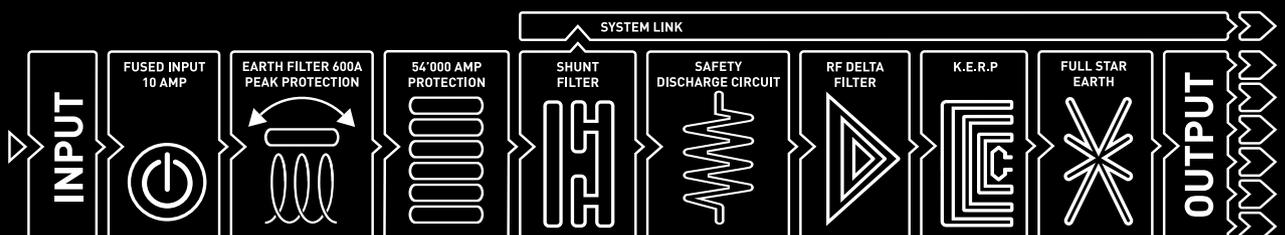
**SYSTEM LINK** outlet for extending the outlets and maintaining a starred earth reference

Supplied with **ISOTEK EV03 PREMIER POWER CABLE**

UK, EU, US, AU & CH outlets available



## Schematic block diagram



THE PERFORMANCE SERIES

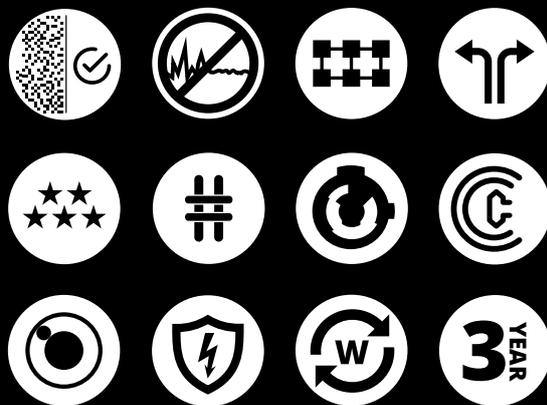
# V5 AQUARIUS

The original Aquarius was one of the most cost-effective power cleaning upgrades money could buy. The new V5 model takes the Aquarius concept to a higher level. There is more instant on tap power due to an increased 35% circuit board copper loading, direct current resistance is at least 25% improved moving closer to the ideal of zero Ohms. Protection is also raised to 81'000A instantaneous. This six-way mains power-cleaning unit resets the market standard. Two high-current outlets are provided for amplifiers, subwoofers and so on, with four medium-current sockets for other components. Each outlet of Aquarius has its own dedicated power-cleaning network, thus six power cleaners in one box!



## TECH ICONS

explained on pages 23-27



EV03 Premier cable is included with the V5 Aquarius



## Available outlets



## Specifications

<b>NUMBER OF OUTLETS</b>	x6 + System Link
<b>TYPE OF OUTLETS</b>	UK, EU, US, AU & CH
<b>SYSTEM LINK</b>	x1
<b>MAINS INLET</b>	16A IEC C20
<b>MAINS VOLTAGE</b>	100-240V / 50-60Hz
<b>MEDIUM CURRENT - 230V</b>	x4 (6A 1'380W total)
<b>MEDIUM CURRENT - 115V</b>	x4 (6A 690W total)
<b>HIGH CURRENT - 230V</b>	x2 (16A 3'680W total)
<b>HIGH CURRENT - 115V</b>	x2 (16A 1'840W total)
<b>SURGE PROTECTION</b>	81'000A
<b>DIMENSIONS (W X H X D)</b>	450 x 110 x 350mm
<b>WEIGHT</b>	9,5kg
<b>DELIVERED WITH CABLE</b>	EV03 Premier
<b>AVAILABLE COLOURS</b>	Black & Silver

## FEATURES

Suitable for all audio or AV systems

RFI reduction 60dB

6 optimised power cleaning circuits to effectively remove Common and Differential Mode mains noise

4 independent outlets for source components (6A)

2 independent high current outlets for power amps, active subwoofers, active speakers etc. (16A)

Easy reset thermomagnetic fusing system

81'000A instantaneous protection, 40'000A continuous

Fully star-earthed network

Solid core Ohno Continuous Cast copper silver-plated internal wiring with FEP virtual air dielectric

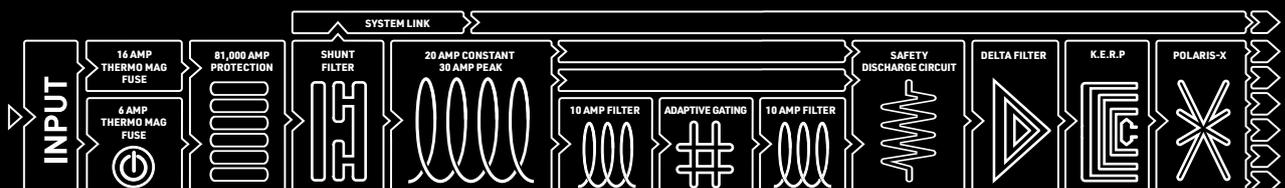
**SYSTEM LINK** outlet for extending the outlets and maintaining a starred earth reference

Supplied with **ISOTEK EV03 PREMIER POWER CABLE**

UK, EU, US, AU & CH outlets available



## Schematic block diagram



THE SELECT SERIES

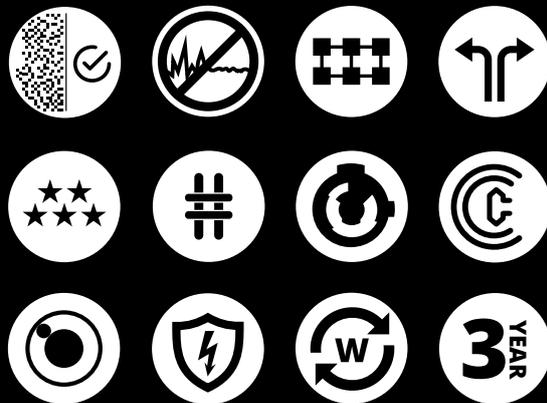
# V5 SIGMAS

One of the most cost-effective upgrades you can buy for any high-quality audio system, V5 Sigmas is a dramatic improvement over its multi-award-winning predecessor. This seven-way mains power cleaning product featuring unique technology developed by IsoTek. Three high-current outlets utilize the Direct-Coupled<sup>®</sup> circuit of Titan to provide high current, low impedance power for amplifiers, subwoofers, or active loudspeakers. The four remaining output sockets are medium-current for source components. Each outlet has its own dedicated power cleaning network; thus, seven power cleaners in one box! Sigmas represents an extremely cost-effective way to fully upgrade a complete high-end audio system.



## TECH ICONS

explained on pages 23-27



EV03 Premier cable is included with the V5 Sigmas



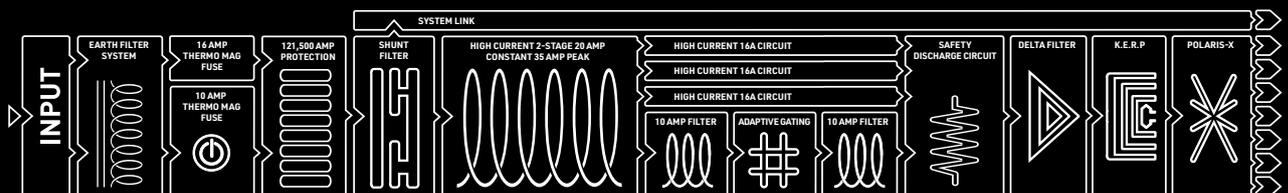
## Available outlets



## Specifications

NUMBER OF OUTLETS	x7 + System Link
TYPE OF OUTLETS	UK, EU, US, AU & CH
SYSTEM LINK	x1
MAINS INLET	16A IEC C20
MAINS VOLTAGE	100-240V / 50-60Hz
MEDIUM CURRENT - 230V	x4 (10A 2'300W total)
MEDIUM CURRENT - 115V	x4 (10A 1'150W total)
HIGH CURRENT - 230V	x3 (16A 3'680W total)
HIGH CURRENT - 115V	x3 (16A 1'840W total)
SURGE PROTECTION	121'500A
DIMENSIONS (W x H x D)	450 x 135 x 350mm
WEIGHT	15kg
DELIVERED WITH CABLE	EV03 Premier
AVAILABLE COLOURS	Black & Silver

## Schematic block diagram



## FEATURES

Suitable for all audio or AV systems

RFI reduction 80dB

7 optimised power cleaning circuits to effectively remove Common and Differential Mode mains noise

4 independent outlets for source components (10A)

3 independent high current outlets for power amps, subwoofers and active loudspeakers (16A)

Easy reset thermo magnetic fusing system

121'500 instantaneous protection.

Fully star-earthed network

Solid core Ohno Continuous Cast Copper, silver-plated internal wiring with FEP virtual air dielectric

**SYSTEM LINK** outlet for extending the outlets whilst maintaining a star earth reference

Supplied with **ISOTEK EV03 PREMIER POWER CABLE**

UK, EU, US, AU & CH outlets available



THE SELECT SERIES

# V5 TITAN

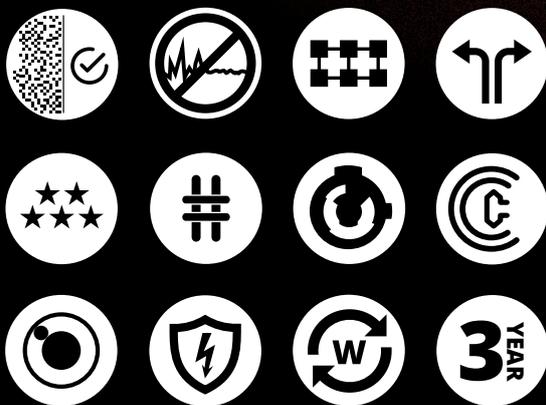
The original Titan, when launched towards the end of 2004 set a new standard for high current power cleaning systems and went on to win Hi-Fi News power cleaning product of the year in 2005 along with numerous other international awards.

The new V5 model offers an additional third output socket as well as a new 'System Link' output, allowing multiple IsoTek devices to be connected via a star earth referencing back to a single wall socket. The legendary Titan Direct Coupled® circuit is also taken to a new level with instant absolute power on tap through over 50% increased PCB copper-loading, moving closer to the ideal of zero Ohms. This vastly improves amperage and decrease resistance. The new circuit also offers twice the inductance with an 80% increase of current handling ability. Protection is also raised to 153'000A instantaneous and 75'000A continuous, it is the most robust surge protection system IsoTek has offered in this model.



## TECH ICONS

explained on pages 23-27



EV03 Premier cable is included with the V5 Titan

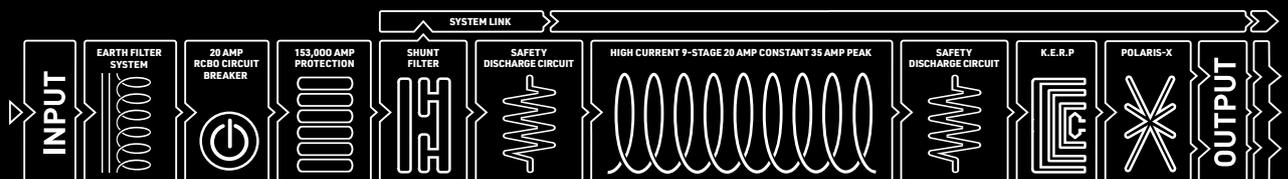
## Available outlets



## Specifications

NUMBER OF OUTLETS	x3 + System Link
TYPE OF OUTLETS	UK, EU, US, AU & CH
SYSTEM LINK	x1
MAINS INLET	16A IEC C20
MAINS VOLTAGE	100-240V / 50-60Hz
HIGH CURRENT - 230V	x3 (16A 3'680W total)
HIGH CURRENT - 115V	x3 (16A 1'840W total)
SURGE PROTECTION	153'000A
DIMENSIONS (W X H X D)	220 x 147 x 350mm
WEIGHT	12kg
DELIVERED WITH CABLE	EVO3 Premier
AVAILABLE COLOURS	Black & Silver

## Schematic block diagram



## FEATURES

Suitable for high current audio or AV systems

RFI reduction 85dB (50 ohms standard), down to 5Hz

Optimised power cleaning circuits effectively remove Common and Differential Mode mains noise

3 independent high current outlets for power amps, subwoofers, active loudspeakers (16A)

Easy reset RCBO fusing system

153'500A instantaneous protection, 75'000 continuous

Fully star-earthed network

Solid core Ohno Continuous Cast copper silver-plated internal wiring with FEP virtual air dielectric

**SYSTEM LINK** outlet for extending the outlets and maintaining a starred earth reference

Supplied with **ISOTEK EVO3 PREMIER POWER CABLE**

UK, EU, US, AU & CH outlets available



# THE POWER TO PERFORM

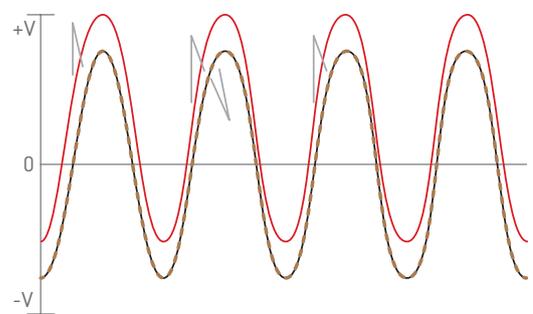
The first input into any audio or AV system is electricity. It flows through the system, utilised by each component in turn to create the signal that eventually moves the speakers' drive units or delivers the pixels on-screen. What we see and hear is ultimately fashioned from, and by, mains electricity – it is the 'raw material' from which the 'art' is created.

The mains supply is distorted by numerous factors as it travels from power stations to be distributed throughout our homes, eroding the performance of high-quality audio and AV systems. As the electronic devices we use proliferate and the demand for electrical power intensifies, the quality of the electricity we feed our systems continues to slide.

'Differential Mode noise' is especially exacerbated by the switch-mode power supplies that are common in many modern devices, from computers to kitchen appliances.

'Common Mode noise' is ever-increasing thanks to wireless networking in the home, with mobile phones, Wi-Fi and Bluetooth bathing us in a sea of airborne interference. Without IsoTek, you are only accessing around 80 percent of your system's full potential, at best.

## SINE WAVE CORRECTION

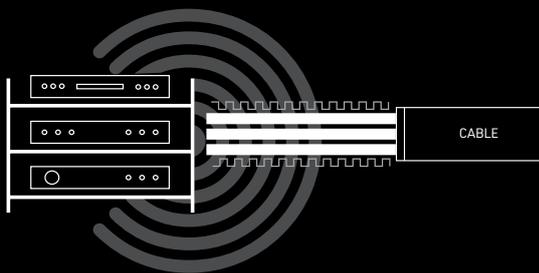


 MAINS SINE WAVE OFF (DC ON THE MAINS)

 ISOTEK CORRECT MAINS SINE WAVE

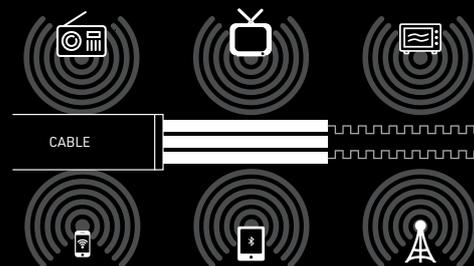
 PERFECT SINE WAVE

 POWER SURGE AND MAINS SPIKE PROTECTION SYSTEM



## DIFFERENTIAL MODE

Differential Mode mains noise is created by all electrical appliances – everything with a power supply, in fact. This includes your microwave oven, your television and your computer, as well as every hi-fi component you own.



## COMMON MODE

Common Mode mains noise is often referred to as RFI – transmitted frequencies that surround us but we cannot see. For example, imagine how much data is transmitted by smartphones and tablets; cheap power cables act as aerials for these unwanted frequencies.

# FEATURES



## REMOVES MAINS NOISE

Differential Mode mains noise is created by all electrical appliances – everything with a power supply, in fact. This includes your microwave oven, your television and your computer, as well as every hi-fi component you own.

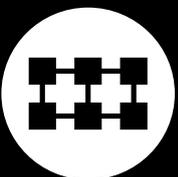
Common Mode mains noise is often referred to as RFI – transmitted frequencies that surround us but we cannot see. For example, imagine how much data is transmitted by smartphones and tablets; cheap power cables act as aerials (antennas) for these unwanted frequencies.



## SINE WAVE CORRECTION

From a high quality audio point of view, mains electricity needs two factors; a nice 50 or 60Hz sine wave supplied from a very low impedance source, without radio frequency noise. The low impedance makes for a near constant voltage regardless of how much power is used in the surrounding area. In reality we can typically expect around 5% fluctuation. The very low impedance of the mains, which is way below 1 ohm at 50 or 60Hz is not maintained when approaching radio frequencies (> 50 ohms > 100 kHz) and acts as an aerial (antenna) inviting RF noise.

IsoTek's power cleaning circuits are designed to reduce impedance whilst remaining safe as well as correcting well into the audio frequency bands. This is not only a judgment from sound electrical engineering, but it also follows the codes of electrical safety, which are independently assessed.



## MULTIPLE FILTER SYSTEM

Many IsoTek products are not just a single power cleaning system but are multiple power cleaners in one convenient chassis. The advantage being that each component in your audio system has its own dedicated clean power delivery system. Furthermore, Differential Mode noise, created as electrical devices draw power, is kept to a minimum and the possibility of electrical noise cross contamination between outlet sockets is eliminated.

Many power cleaning systems simply place a standard filter design in a box with all outlet sockets joined together in series one after the other, thus connected equipment cross contaminates and the purpose of the product is lost.



## INDEPENDENT SOCKETS

IsoTek products feature outlet sockets that are totally independent from each other; no two outlet sockets being directly connected. This is a critical point for limiting or eliminating the cross contamination of Differential Mode mains noise.

Each socket connects directly back to the PCB and is serviced by IsoTek's unique power cleaning technologies.



## HIGH GRADE COMPONENTS

Every IsoTek product uses the finest grade electrical components, many custom made, using the highest quality metals and materials which are specifically designed for purpose. Quality doesn't stop at parts but also extends into the PCB designs, which maintain high levels of amperage and extraordinarily low levels of resistance, using up to eight times the general standard of copper prior to pure silver plating.

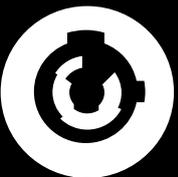
Internal wiring also uses high purity coppers combined with silver plating, with either Fluorinated Ethylene Propylene (FEP) dielectric or IsoTek's Virtual Dielectric of Air (VDA), where a FEP tube is wound around the conductor before an extruded FEP dielectric protects this construction giving unrivalled performance and the ultimate low resistance, high performance internal power delivery system.



## ADAPTIVE GATING

IsoTek's unique Adaptive Gating system determines the appropriate level of differential filtration for any connected load. The maximum level of overall power filtration is achieved whilst respecting current requirements.

This system also eliminates Differential Mode noise cross contamination between outlet sockets, as all connected devices will corrupt the supplied clean power upon consumption throwing back Differential Mode noise. It is vital that this noise isn't allowed to affect another component's performance.



## SYSTEM LINK

Some IsoTek products contain a System Link outlet, this is designed to connect multiple units together, maintaining a shared earth reference, and preserving the need for multiple wall outlet sockets.

This is particularly useful for joining multiple units together using our System Link cable available in EVO3 Initium, EVO3 Premier, EVO3 Sequel and EVO3 Optimum quality.

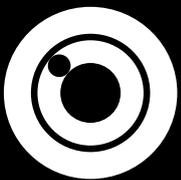


### **K.E.R.P.**

Technical papers state that Kirchhoff's circuit laws are two equalities that deal with the current and potential difference (commonly known as voltage) in the lumped element model of electrical circuits. They were first described in 1845 by German physicist Gustav Kirchhoff. This generalized the work of Georg Ohm and preceded the work of James Clerk Maxwell. Widely used in electrical engineering, they are also called Kirchhoff's rules or simply Kirchhoff's laws. These laws can be applied in time and frequency domains and form the basis for network analysis.

The guiding principles for IsoTek circuits are driven by Kirchhoff's two current laws, a simple analogy would be that for every litre of water placed into a water distribution system we would expect to get the same out.

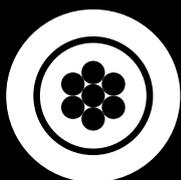
To put it another way, Kirchhoff and Gauss described how seemingly impossible problems could be resolved by the concept of a town. If traffic flows on a circular orbital road around the town there is no effect on the town. However, if traffic enters the town, then there will be an effect on the town, and however many cars that enter eventually have to leave. The structure of that town will have either a positive or negative effect on that migration. In electronics this is also true. We must totally respect the signal path as, whether one wishes it or not, ultimately everything will be in the signal path to a greater or lesser degree.



### **SOLID OCC COPPER AG**

As one would expect the internal wiring of any IsoTek product is of the highest standard, ultra pure Ohno Continuous Cast copper solid core conductor strands with silver-plating offer low resistance and high amperage. A Fluorinated Ethylene Propylene (FEP) helix is wound around the conductor before an extruded FEP dielectric protects the conductor and creates a Virtual Dielectric of Air (VDA). This construction gives unrivalled performance and gives the ultimate low resistance, high performance internal power delivery system.

IsoTek's internal wiring synergizes with the range of IsoTek power cables. One critical but overlooked area is maintaining commonality of design and material properties though an audio wiring loom, be it signal carrying cables or your power cable network.



### **MULTI 6N OFC AG**

As one would expect, the internal wiring of any IsoTek product is of the highest standard, pure 6n OFC (Oxygen Free Copper - 99.9999%) conductor strands with silver-plating offer low resistance and high amperage. An FEP dielectric is used to protect the conductors as well as giving the ultimate internal power delivery system.

IsoTek's internal wiring synergizes with the range of IsoTek power cables. One critical but overlooked area is maintaining commonality of design and material properties though an audio wiring loom, be it signal carrying cables or your power cable network.



## **SURGE PROTECTION**

Power surges or spikes on the mains supply are generally very bad for any electrical device especially a high quality audio replay system. Power surges occur when there is a boost to the electrical charge at some point in the power lines. This causes an increase in the electrical potential energy, which can increase the current flowing to your wall outlet. This in turn can damage your sensitive audio system.

The IsoTek protection system uses an array of VDRs which offer a cascading level of protection, in some cases over 100,000A. These step in fast and sequentially dependent upon the severity of the encountered power surge or spike. The architecture of the protection circuit extends dramatically and almost instantly when required.

The protection circuit has two primary functions, one to preserve itself and the second to step in gradually as any problem increases, with the ability to act very fast should an extreme condition occur. The protection circuits also protect the filters and the filters assist the protection in the initial stage. Unlike many protection devices these assist sound quality as well as providing protection. Studies suggest this problem is not subtle and is frequent. The disturbing challenge is the 1,000 to 6,000V range. It is likely most protection systems do very little good and probably cause sound degradation.



## **CONTINUOUS ABSOLUTE POWER**

IsoTek delivers absolute power, unrestricted current delivery within what the power company can supply and regulations allow. Generally for power amplifiers or high wattage electronics IsoTek provides output which offers extremely low impedance and low DCR, this completely eliminates (within the concepts of power filtering) any possibility of current restriction and enhances dynamic range, the impedance of the chain back to the power station being far larger. When power is contaminated dynamic range is reduced.

It is impossible to get more than 100% out of the mains supply. The very principle of AC power is that it doesn't store energy in the transmission system. It is therefore impossible to store energy in an AC system by the very principles by which it works. There can be no so-called power reserve, thus a power reserve within an AC circuit in the truest sense of the word does not and cannot exist.

**For more information: <https://isoteksystems.com/clean-power/#features>**



## CONTINUOUS ABSOLUTE POWER

Power reserve would require the voltage to increase as ohms law insists it must, saying a circuit doesn't sag isn't a reserve of power. The AC waveform goes between maximum and minimum points at 50 Hz in 10 mS, it then swings to the maximum negative value. At 20 mS a full cycle is achieved. Therefore, in fact the average values of an AC waveform is zero. Only as a power wave can it be positive, this is due to the law of squared negatives. It looks like a ballooned sine wave where the value of 45 degrees is 0.5 not 0.7071 from a trigonometric table. Were this only a voltage wave it would have a long-term value of zero! As far as energy storage is concerned zero is the value of stored energy.

Direct Current resistance (DCR) will cause sag. To put it in other words, a system has to be developed which does not limited the power reserve of the power station, meaning a circuit needs to have extremely low resistance whilst maintaining sufficiently high inductance. When done correctly and in perfect balance the inductance is virtually zero at 50/60 Hz and the Direct Current resistance (DCR) is also very close to zero. Therefore an ideal filter circuit must maintain zero Ohms resistance DC (or very close) and considerable AC resistance to noise above 50/60 Hz. Despite statements to the contrary, this is precisely where correctly specified materials matter most. Whilst some might consider these 'exotic' they represent a critical and important part of the function and appropriate to use. Remarkably IsoTek filter designs can maintain very low resistance at 50/60Hz but have very high amounts of noise cancellation above that frequency.

Most AC circuits are reactive - produce a reaction either from the power drawn or the circuit itself, but simply they are not pure resistors and behave like a capacitance and resistance or an inductance and resistance. In an ideal world the only allowable impediment is resistance and ideally this needs to be extremely low. A dilemma, do you want high transient power or do you want heavy filtration - amazingly you can have both, but one must have components of the very highest quality, which are designed specifically for purpose with totally correct architecture. This is extremely complex and has resulted in the design of specialist parts; these do not exist outside the world of specialist power engineering and are unique to IsoTek designs.



## 3 YEAR WARRANTY

As part of our on-going commitment to the highest standards of customer service, IsoTek offers you the opportunity to extend the standard 2 years product warranty to 3 years, free of charge.

Simply **REGISTER YOUR PURCHASE** with IsoTek. We do not share your personal details with any third parties without your permission.

# Isotek®

© 2023 Audio Power Systems GmbH. All rights reserved.

Unauthorised copy or reproduction of any part of this booklet is prohibited and subject to prosecution.

Information contained in this brochure is correct at the time of printing, product improvements will take place from time to time. Three-dimensional illustrations and cross sectional cut through images are for illustrative purposes only. Cable specifications may vary slightly to meet local certification standards.