



DISCOVERY
& PERFORMANCE
RANGE

Isotek®

V5 SYNCRO UNI 10 & 16

INSTRUCTION MANUAL



ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | 中文 | РУССКИЙ



DISCOVERY
& PERFORMANCE
RANGE

V5 SYNCRO UNI 10 & 16





IsoTek® | SYNCRO UNI

Congratulations on purchasing the IsoTek V5 Syncro Uni, designed specifically for your audio, audio-visual or streaming based system. For more than 20 years IsoTek has earned the reputation as the leader in clean power technology for high quality audio or audio-visual replay, consistently winning multiple international awards for performance and innovation.

Without mains power no audio or audio-visual component can function. Your musical enjoyment is reduced by poor mains quality through mains noise contamination – this can be from either Differential or Common Mode mains noise. Differential Mode noise is created by the power supplies in all electronic devices, while Common Mode noise is introduced by RFI and the wireless communications that surround us.

V5 Syncro Uni incorporates unique DC-cancelling electronics that rebalance the mains sine wave on the zero volts line to dramatically reduce/silence transformer hum. This sophisticated product can be used independently for a single component, or in combination with another IsoTek power cleaner as an upgrade and to deliver a fully rebalanced sine wave across all output sockets.

FEATURES

(For more technical information please turn to page 15-19 of this manual.)



SINE WAVE
CORRECTION



HIGH GRADE
COMPONENTS



MULTI 6N
OFC AG



CONTINUOUS
ABSOLUTE POWER



3
YEAR
WARRANTEE



SAFETY FIRST

PLEASE READ THE FOLLOWING INSTRUCTIONS BEFORE INSTALLATION

DO NOT expose this product to dripping or splashing and no objects filled with liquids, such as vases, shall be placed near the apparatus. If liquid enters the chassis immediately unplug from the wall socket.

DO NOT impede ventilation by covering the ventilation openings with items, such as newspapers, table-cloths, curtains, etc.;

DO NOT expose this product to naked flame sources, such as lighted candles, these should not be placed near the apparatus;

MAKE SURE that this appliance (CLASS 1) is connected to a mains outlet socket with protective earth.

PLEASE NOTE that whilst the power on switch or MCB fuse will switch off the unit it is not an isolator. Removing the IEC cable will isolate the unit, therefore the mains plug is used as the disconnect device and must remain readily operable.



OUTPUT SOCKETS

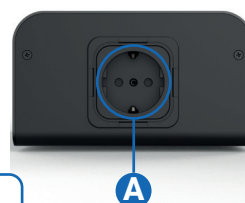
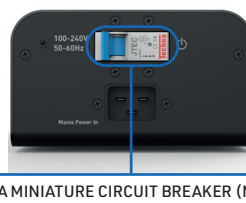
ADDITIONAL INFORMATION ON FUSING AND RATINGS

- A** The output socket marked 'A' is designed for use with all electrical devices. For the 10A version of Syncro Uni the socket is protected by a 10A fuse (T10AH250). This can be located in the draw tray under the IEC input. The rated maximum total load for is 10A, 2300W at 230V / 1150W at 115V. For the 16A version of Syncro Uni an electronic MCB fuse is used for protection and can be easily reset if needed. The rated maximum total load is 16A, 3680W at 230V / 1840W at 115V.

SYNCRO UNI 10



SYNCRO UNI 16



SERVICE & REPAIR

NO USER SERVICEABLE PARTS INSIDE

Should the unit fail, or cease to function, or function in a manner which seems unusual, please immediately turn off and unplug from the mains supply.

Send an email to: support@isoteksystems.com

SÉCURITÉ AVANT TOUT

VEUILLEZ LIRE LES INSTRUCTIONS SUIVANTES AVANT L'INSTALLATION

NE PAS exposer ce produit à des éclaboussures ou gouttes de liquide, et aucun objet rempli de liquide, tel que des vases, ne doit être placé à proximité de l'appareil. Si du liquide pénètre dans le châssis, débranchez immédiatement la prise de courant.

NE PAS obstruer la ventilation en couvrant les ouvertures avec des objets tels que journaux, nappes, rideaux, etc.

NE PAS exposer ce produit à des sources de flammes nues, telles que des bougies allumées, qui ne doivent pas être placées près de l'appareil.

ASSUREZ-VOUS que cet appareil (CLASSE 1) est connecté à une prise secteur avec mise à la terre protectrice.

VEUILLEZ NOTER que bien que l'interrupteur d'alimentation ou le fusible MCB éteigne l'appareil, il ne s'agit pas d'un isolateur. Retirer le câble IEC isolera l'appareil, donc la fiche secteur est utilisée comme dispositif de déconnexion et doit rester facilement accessible.



PRISES DE SORTIE

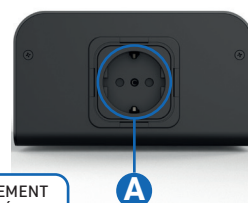
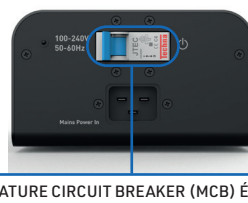
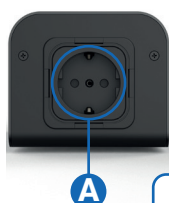
INFORMATIONS SUPPLÉMENTAIRES SUR LES FUSIBLES ET LES CARACTÉRISTIQUES

- A** La prise de sortie marquée "A" est conçue pour être utilisée avec tous les appareils électriques. Pour la version 10A de Syncro Uni, la prise est protégée par un fusible de 10A (T10AH250) situé dans le tiroir sous l'entrée IEC. La charge totale maximale est de 10A à 230V soit 2300W, ou 1150W à 115V. Pour la version 16A de Syncro Uni, un fusible électronique MCB est utilisé pour la protection et peut être facilement réinitialisé si nécessaire. La charge totale maximale est de 16A à 230V soit 3680W, ou 1840W à 115V.

SYNCRO UNI 10



SYNCRO UNI 16



SAV ET REPARATIONS

IL N'Y A AUCUNE PIÈCE REPARABLE PAR LE PARTICULIER À L'INTÉRIEUR

En cas de dysfonctionnement ou d'arrêt précipité de l'appareil, éteignez-le et débranchez-le de la prise secteur.

Envoyer un email à: support@isoteksystems.com



SICHERHEIT ZUERST

BITTE LESEN SIE DIE FOLGENDEN ANWEISUNGEN VOR DER INSTALLATION

SETZEN SIE dieses Produkt NICHT Feuchtigkeitstropfen oder Feuchtigkeitsspritzern aus, und stellen Sie keine mit Flüssigkeiten gefüllten Gegenstände, wie Vasen, in die Nähe des Geräts. Wenn Flüssigkeit in das Gehäuse eindringt, ziehen Sie sofort den Netzstecker.

BEHINDERN SIE NICHT die Belüftung, indem Sie die Lüftungsöffnungen mit Gegenständen wie Zeitungen, Tischdecken, Vorhängen usw. abdecken.

SETZEN SIE dieses Produkt NICHT offenen Flammenquellen wie brennenden Kerzen aus, die nicht in der Nähe des Geräts platziert werden sollten.

STELLEN SIE SICHER, dass dieses Gerät (KLASSE 1) an eine Netzsteckdose mit Schutzerdung angeschlossen ist.

BEACHTEN SIE, dass der Netzschalter oder die MCB-Sicherung das Gerät zwar ausschalten, jedoch keine Trennschalter sind. Das Entfernen des IEC-Kabels trennt das Gerät, daher dient der Netzstecker als Trennvorrichtung und muss leicht zugänglich bleiben.



AUSGANGSSTECKDOSEN

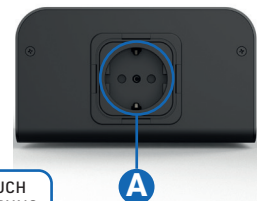
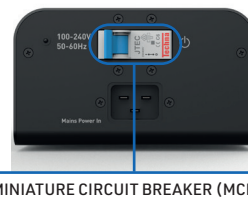
ZUSÄTZLICHE INFORMATIONEN ZU SICHERUNGEN UND MAXIMALEN BELASTUNG

A Die mit "A" gekennzeichnete Ausgangssteckdose ist für alle elektrischen Geräte geeignet. Bei der 10A-Version von Syncro Uni ist die Steckdose durch eine 10A-Sicherung (T10AH250) geschützt, die sich im Schubladenfach unter dem IEC-Eingang befindet. Die maximale Gesamtbelastung beträgt 10A bei 230V (2.300W) oder 1.150W bei 115V. Bei der 16A-Version von Syncro Uni wird ein elektronischer MCB-Schutz verwendet, der bei Bedarf einfach zurückgesetzt werden kann. Die maximale Gesamtbelastung beträgt 16A bei 230V (3.680W) oder 1.840W bei 115V.

SYNCRO UNI 10



SYNCRO UNI 16



SERVICE & REPARATUREN

IM GEHÄUSE BEFINDEN SICH KEINE VOM BENUTZER ZU WARTENDE ODER ZU REPARIERENDE TEILE

Sollte dieses Gerät nicht mehr korrekt funktionieren oder eine Funktion ungewöhnlich erscheinen, schalten Sie es bitte sofort aus und trennen es vom Stromnetz.

Senden Sie eine E-Mail an: support@isoteksystems.com



SEGURIDAD ANTE TODO

LEA LAS SIGUIENTES INSTRUCCIONES ANTES DE LA INSTALACIÓN

NO exponga este producto a goteos o salpicaduras, ni coloque objetos llenos de líquido, como jarrones, cerca del aparato. Si entra líquido en el chasis, desconecte inmediatamente el enchufe de la toma de corriente.

NO obstruya la ventilación cubriendo las aberturas con elementos como periódicos, manteles, cortinas, etc.

NO exponga este producto a fuentes de llamas abiertas, como velas encendidas, que no deben colocarse cerca del aparato.

ASEGÚRESE de que este aparato (CLASE 1) esté conectado a una toma de corriente con puesta a tierra protectora.

TENGA EN CUENTA que, aunque el interruptor de encendido o el fusible MCB apaguen la unidad, no se trata de un aislador. Desconectar el cable IEC aislará la unidad, por lo tanto, el enchufe principal se utiliza como dispositivo de desconexión y debe permanecer fácilmente accesible.



TOMAS DE SALIDA

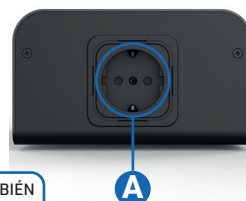
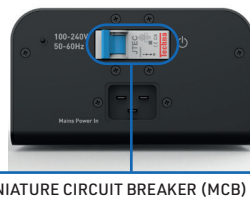
INFORMACIÓN ADICIONAL SOBRE FUSIBLES Y CAPACIDADES

A La toma de salida marcada como "A" está diseñada para su uso con todos los dispositivos eléctricos. Para la versión de 10A de Syncro Uni, la toma está protegida por un fusible de 10A (T10AH250) ubicado en la bandeja del cajón debajo de la entrada IEC. La carga total máxima es de 10A a 230V (2300W) o 1150W a 115V. Para la versión de 16A de Syncro Uni, se utiliza un fusible electrónico MCB para protección, el cual se puede reiniciar fácilmente si es necesario. La carga total máxima es de 16A a 230V (3680W) o 1840W a 115V.

SYNCRO UNI 10



SYNCRO UNI 16



SERVICIO & REPARAR

NO CONTIENE PIEZAS QUE PUEDA REPARAR EL USUARIO

Si el aparato fallara, dejara de funcionar o funcionara de algún modo diferente al habitual, apáguelo inmediatamente y desconéctelo de la red eléctrica.

Envíe un e-mail a: support@isoteksystems.com



安全第一

请在安装前阅读以下说明

不要将本产品暴露于滴水或溅水环境中，也不要将装有液体的物体（如花瓶）放置在设备附近。如果液体进入机壳，请立即拔掉电源插头。

不要用报纸、桌布、窗帘等物品覆盖通风口以阻碍通风。

不要将本产品暴露于明火源（如点燃的蜡烛），这些物品不应放置在设备附近。

确保本设备（CLASS 1）连接到带保护接地的电源插座。

请注意，虽然电源开关或MCB保险丝可以关闭设备，但它不是隔离器。拔下IEC电缆将隔离设备，因此电源插头用作断开装置，必须保持随时可操作。



输出插座

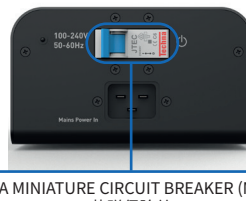
关于保险丝和额定值的附加信息

- A** 标有“A”的输出插座适用于所有电气设备。对于10A版本的Syncro Uni，插座受10A保险丝（T10AH250）保护，该保险丝位于IEC输入下的抽屉中。最大额定总负载为230V时10A（2300W），115V时为1150W。对于16A版本的Syncro Uni，使用电子MCB保险丝进行保护，并可根据需要轻松复位。最大额定总负载为230V时16A（3680W），115V时为1840W。

SYNCRO UNI 10



SYNCRO UNI 16



服务与维修

产品中没有用户可以自己维修的部件。

当设备发生故障、停止运作、或运转不正常时，请立即关机，并拔掉电源插头。

发送电子邮件至：support@isoteksystems.com

БЕЗОПАСНОСТЬ ПРЕЖДЕ ВСЕГО

ПОЖАЛУЙСТА, ПРОЧИТАЙТЕ СЛЕДУЮЩИЕ ИНСТРУКЦИИ ПЕРЕД УСТАНОВКОЙ

НЕ подвержайте данный продукт воздействию капель или брызг, а также не размещайте рядом с устройством предметы, наполненные жидкостью, такие как вазы. Если жидкость попадет внутрь корпуса, немедленно отключите устройство от сети.

НЕ препятствуйте вентиляции, закрывая вентиляционные отверстия предметами, такими как газеты, скатерти, шторы и т. д.

НЕ подвержайте данный продукт воздействию открытого пламени, например, зажженных свечей, которые не должны находиться рядом с устройством.

УБЕДИТЕСЬ, что данное устройство (КЛАСС 1) подключено к электрической розетке с защитным заземлением.

ОБРАТИТЕ ВНИМАНИЕ, что хотя выключатель питания или предохранитель МСВ выключают устройство, они не являются изолирующими элементами. Для полной изоляции устройства необходимо отключить кабель IEC, поэтому сетевой штекер используется как устройство для отключения и должен оставаться легко доступным.

ВЫХОДНЫЕ РОЗЕТКИ

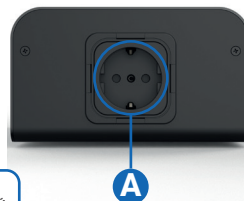
ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ О ПРЕДОХРАНИТЕЛЯХ И ХАРАКТЕРИСТИКАХ

A Выходная розетка с маркировкой "A" предназначена для использования с любыми электрическими устройствами. Для версии Syncro Uni на 10А розетка защищена предохранителем на 10А (T10AH250), который находится в выдвижном отсеке под входом IEC. Максимальная допустимая суммарная нагрузка составляет 10А при 230В (2300Вт) или 1150Вт при 115В. Для версии Syncro Uni на 16А используется электронный предохранитель МСВ, который можно легко сбросить при необходимости. Максимальная допустимая суммарная нагрузка составляет 16А при 230В (3680Вт) или 1840Вт при 115В.

SYNCRO UNI 10



SYNCRO UNI 16



ОБСЛУЖИВАНИЕ И РЕМОНТ

Необслуживаемые компоненты

Если устройство неисправно или перестает функционировать, или работает не должным образом, пожалуйста, немедленно выключите устройство и отключите от электросети.

Написать по электронной почте: support@isoteksystems.com



V5 SYNCRO UNI

1 UNPACK

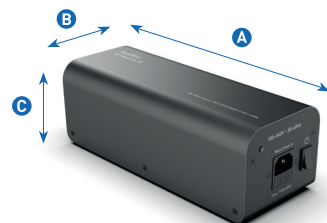
DEBALLAGE | DESEMBALAR
AUSPACKEN | 打开包装
| РАСПАКОВКА

WHAT IS IN THE BOX?

SYNCRO UNI 10 - PRODUCT WEIGHT 1.5kg
PRODUCT DIMENSIONS 250mm (A) x 100mm (B) x 85mm (C)

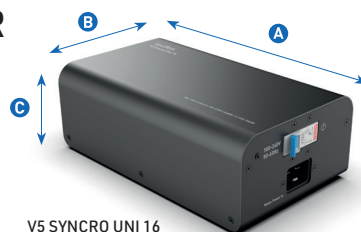
SYNCRO UNI 16 - PRODUCT WEIGHT 2kg
PRODUCT DIMENSIONS 250mm (A) x 150mm (B) x 85mm (C)

Available output sockets:



V5 SYNCRO UNI 10

OR

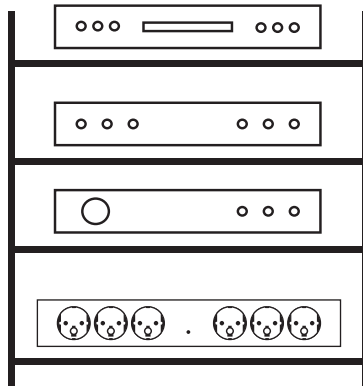


V5 SYNCRO UNI 16

3 PLACEMENT

PLACEMENT | UBICACIÓN
POSITIONIEREN | 安全置放
| УСТАНОВКА

MINIMUM SPACE & MAXIMUM WEIGHT



V5 POLARIS
Use Syncro Unit with other IsoTek power
cleaners for greater effect

V5 SYNCRO UNI 10

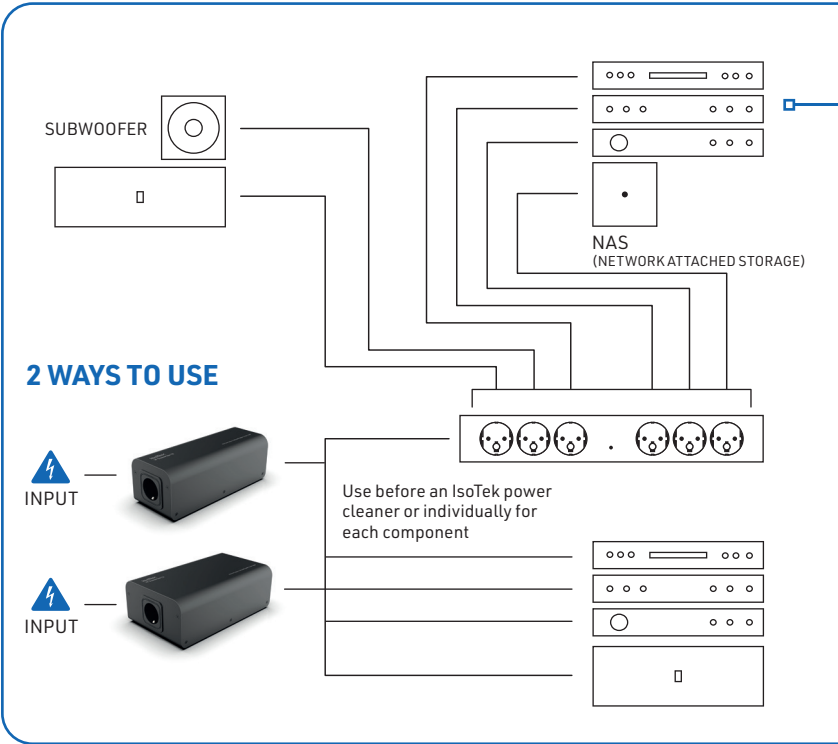


OR

V5 SYNCRO UNI 16

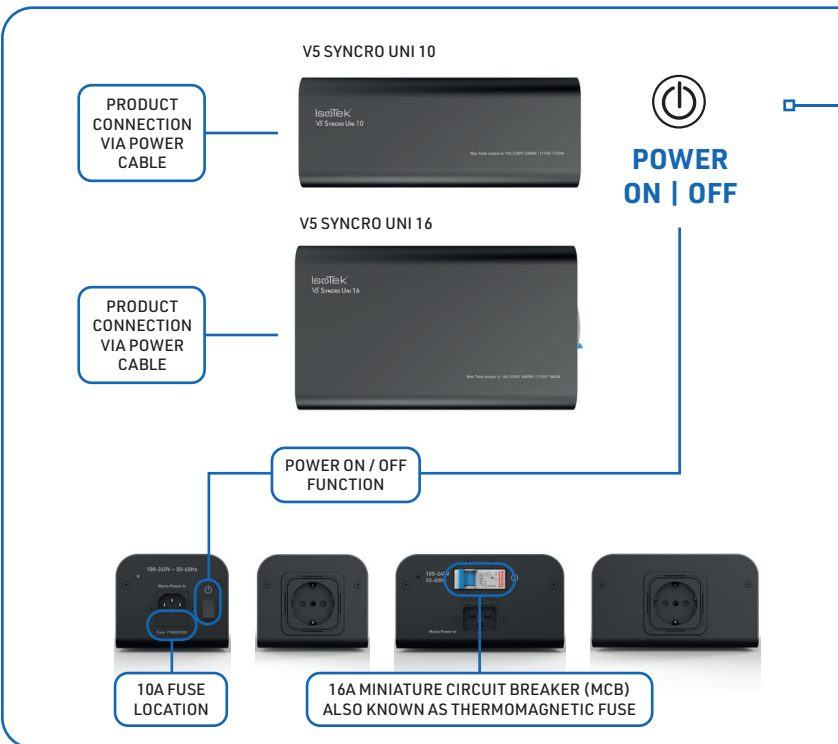


WALL MOUNTING KIT INCLUDED



2 PLUG IN

BRANCHEMENT SECTEUR
 CONECTAR | EINSTECKEN
 | 打开包装 | ПОДКЛЮЧЕНИЕ
 К СЕТИ



4 TURN ON

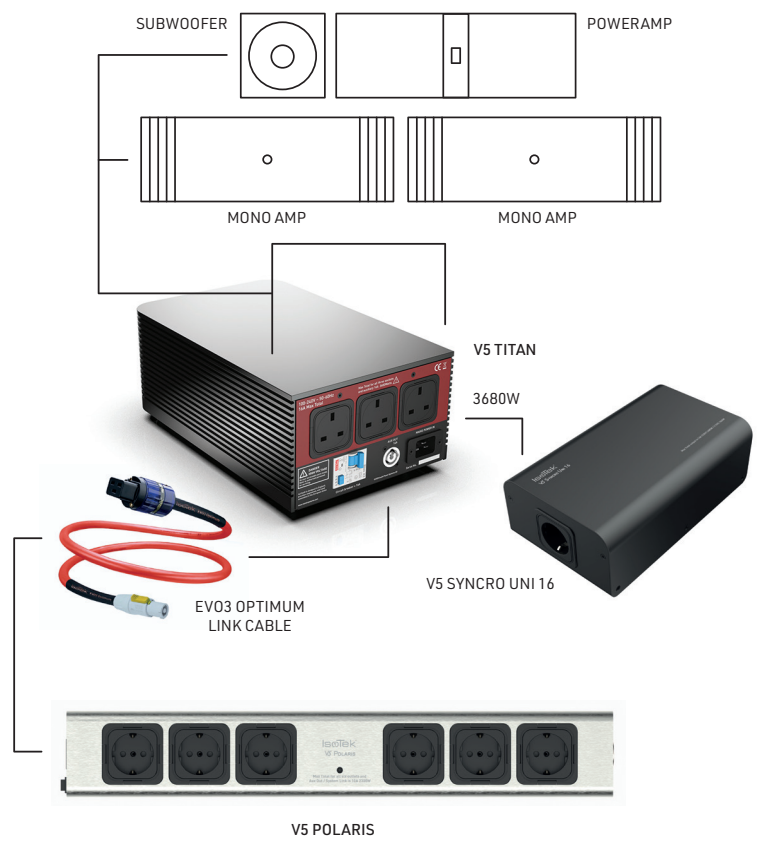
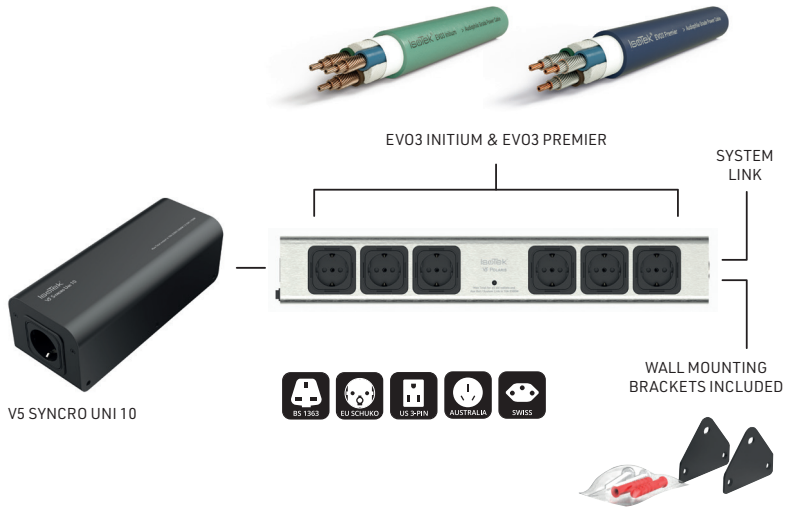
MISE EN ROUTE |
 EINSCHALTEN | ENCENDER
 | 启动电源 | ВКЛЮЧЕНИЕ



V5 SYNCRO UNI

5 UPGRADE

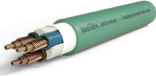
MISE A JOUR | UPGRADE
ACTUALIZAR | 修正微调
| ОБНОВЛЕНИЕ





UPGRADE PERFORMANCE WITH CABLE CHOICES

EV03 INITIUM



EV03 PREMIER



EV03 ELITE



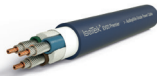
EV03 OPTIMUM



EV03 INITIUM



EV03 PREMIER



EV03 ELITE



EV03 OPTIMUM



EXTEND YOUR WARRANTY FOR FREE

PROLONGEZ LA GARANTIE GRATUITEMENT
 KOSTENLOSE GARANTIEVERLÄNGERUNG UNTER
REGISTRO: PROLONGUE LA GARANTÍA GRATIS

注册会员: 可延长质保, 享受更多增值服务

**РЕГИСТРАЦИЯ: РАСШИРЯЕТ
 БЕСПЛАТНУЮ ГАРАНТИЮ**

6 REGISTER



[ISOTEKSYSTEMS.COM/REGISTER](https://isoteksystems.com/register)



V5 SYNCRO UNI 10 & 16

THE POWER TO PERFORM

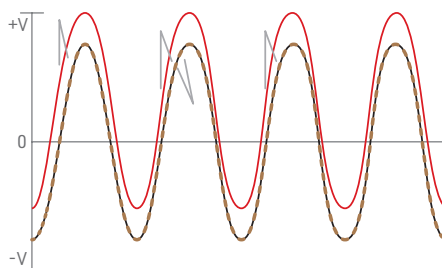
The first input into any audio or AV system is electricity. It flows through the system, utilised by each component in turn to create the signal that eventually moves the speakers' drive units or delivers the pixels on-screen. What we see and hear is ultimately fashioned from, and by, mains electricity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

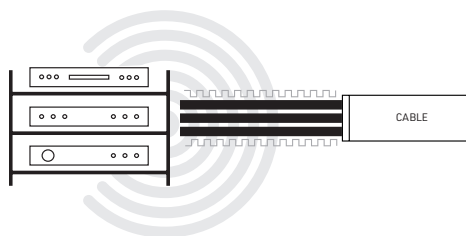
'Differential Mode noise' is especially exacerbated by the switch-mode power supplies that are common in many modern devices, from computers to kitchen appliances.

'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

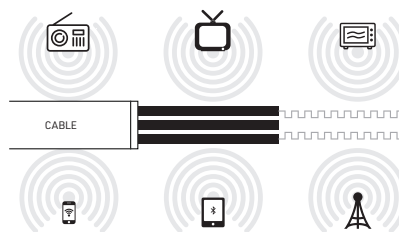


- MAINS SINE WAVE OFF (DC ON THE MAINS)
- PERFECT SINE WAVE
- ISOTEK CORRECT MAINS SINE WAVE
- POWER SURGE AND MAINS SPIKE PROTECTION SYSTEM



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.

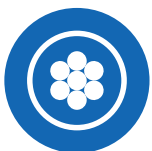


V5 SYNCRO UNI 10 & 16



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.



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.



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.

In the Mosaic One Series this is particularly useful for joining multiple units together using our System Link cable.



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.



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.



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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.



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 limit 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®

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