

# ISOL - 8

**Isolate**, *ī SŌ-lāt*, v.t. to render free from external influence

## SUBSTATION : The Next Generation



# Power: The Primary system component



Power is the primary component, it is the foundation on which your system is built. The quality of the mains supply is the first issue. Consider the chain of power distribution: mains borne noise from connected appliances, DC components, harmonic distortion and RFI are all introduced to the grid by other users, ever present at your wall outlet. How this affects your equipment is complex and down to many factors and the mains input of your equipment is not where the problem ends. The second issue is the quality of the power supplies within your system's components. These are inevitably not perfect and have a major influence on how your system performs in the real world.

Let's look more closely at the linear and switching power supplies we find in any system component. We see transformers that are able to pass energy in either "direction" over a broad range of frequencies dependent on their design and manufacture. Diode rectifiers create noise as current is pulled hard in packets from the supply to charge the main reservoir capacitors. A typical power supply actually generates noise which must be suppressed. There is also local noise generated by the working circuits themselves. Any attempt to filter all this noise by the internal power supplies will be only partially successful.

Why? Because real world does not even closely approach theoretical ideals. The electronic components used in manufacture to try and deal with these problems are not perfect. For example any capacitor has load and temperature related effects, equivalent series resistance, inductance, and thus self resonance too; all of which conspire to reduce their effectiveness and cause interaction with other circuit elements in unpredictable ways. Subject even the best equipment to scrutiny and inevitably you will find it has been built to a price. It will have a power supply that has partial transparency to external electrical noise, elements that actually make noise, and circuits that are vulnerable to noise to some degree.

This is where ISOL-8's expertise provides substantial opportunities to release performance. Performance that has been lost to real world compromises in the design and manufacture of your system; providing a firm foundation of clean power.

# A New Concept in Power Conditioning

The SubStation LC, HC and Axis build on the substantial achievements of the Substation Vogue and Qube with a new semi modular format and DC blocking as standard. Standing alone, or in combination for even greater performance; they form a flexible, effective solution to satisfy the most demanding audiophile. The all new SubStations provide a truly powerful foundation for your system, so it can always perform at its very best.

They all share the same outstanding UK made build quality with a five year guarantee\*. PTFE insulated silver plated wiring, premium quality components and connectors are standard. The non magnetic, all alloy, half width case allows two to be placed side by side on a standard equipment shelf. Each unit provides a different function, so you can upgrade your power supply as your system evolves without costly trade-ins or compromising performance.



# Technology

ISOL-8's fourth generation of SubStation brings a new family of audiophile power conditioners that complement each other with one aim: Ultimate performance. Each is engineered without compromise, releasing system performance that has been lost to power supply degradation. Here's how:

## **Multiple Filter Sections:**

Each system component is not blameless and generates significant mains noise itself. By employing separate filters for each outlet, external noise and noise generated *from within the system* are both blocked. Each filter section can then be designed for its dedicated load. The optimum solution.

## **Axis DC Blocking:**

Any mains waveform that is not symmetrical in energy content will contain a DC voltage component. The AC transformers fitted to your equipment's power supply are compromised by DC, which partially saturates their magnetic circuit. The ISOL-8 Axis circuit eliminates this common mains problem, suppressing acoustic hum and liberating system performance.

## **Spike and Surge Protection:**

The mains power supply can often exhibit short term voltage spikes and surges. These events can cause damage to unprotected components. ISOL-8 protects your valuable investment with an energy absorbing network, clamping dangerously high voltage peaks so you can enjoy peace of mind.

## **Earth Line Chokes:**

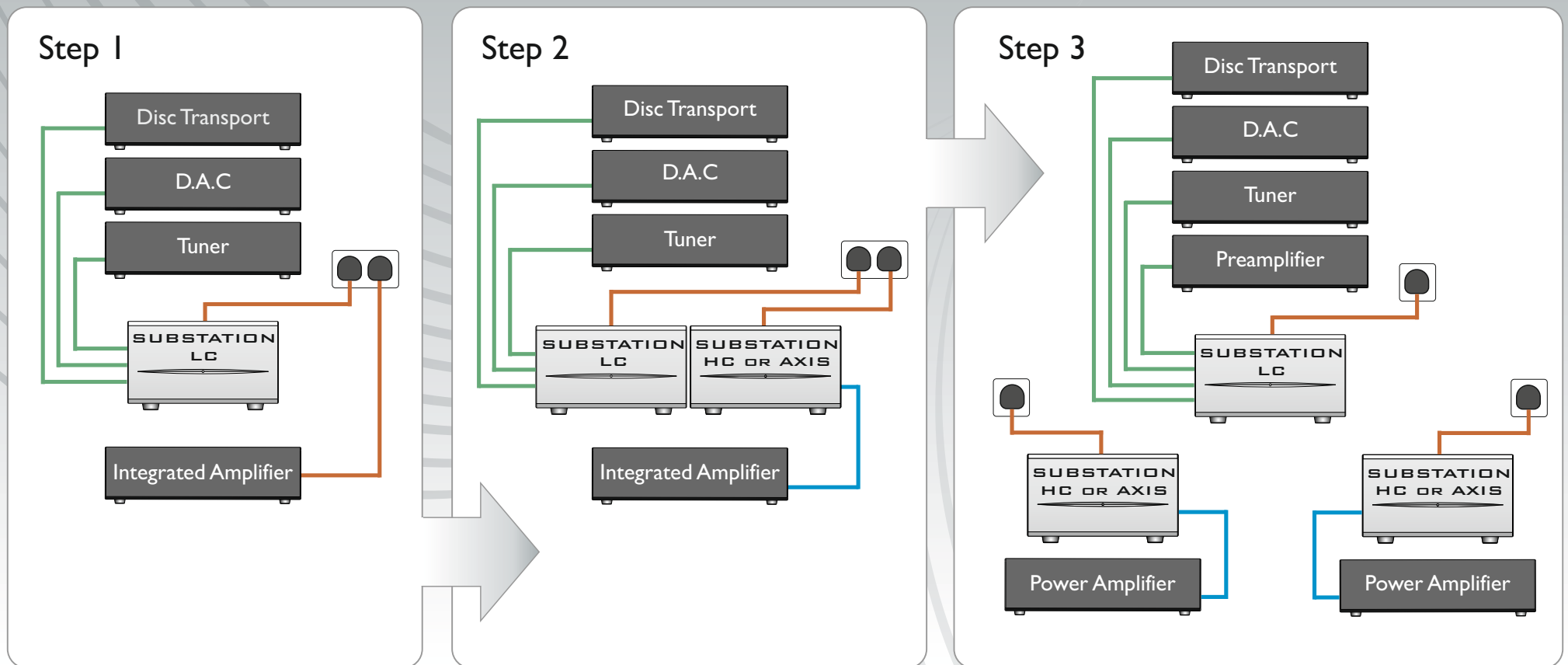
The safety earth presents an excellent opportunity for radio frequency interference (RFI) to enter your system. ISOL-8 earth line chokes are custom wound on special core material to prevent RFI circulating within the system earth and degrading sound quality through intermodulation.

## **Transmodal Filtering:**

All mains filters are not created equal. ISOL-8 Transmodal filters are designed to combat all major types of transmitted electrical noise, both differential and common mode. Asymmetrically present in Live and Neutral conductors, differential mode noise is costly to effectively attenuate and is simply ignored by many other mains conditioners.

# Flexibility

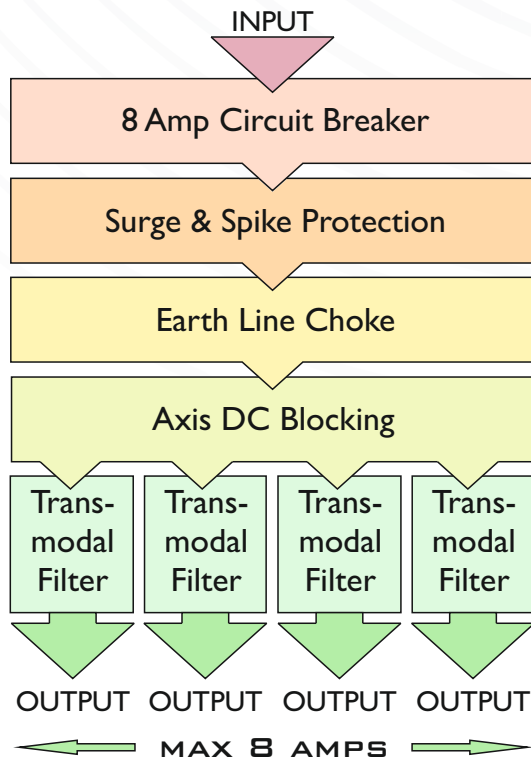
The SubStation family has the flexibility to always deliver the optimum power solution. As your system grows and evolves, so you can adapt and improve your power supply in stages, avoiding costly dead ends.



# SubStation LC

The SubStation LC (Low current) is the cornerstone of the range. 8 Amps is continuously available across the four outlets for system source components. Constructed with carefully auditioned premium components including OFC copper foil inductors, the SubStation LC readily liberates performance lost to compromised mains power. It is our ultimate passive power conditioner for low to medium current loads.

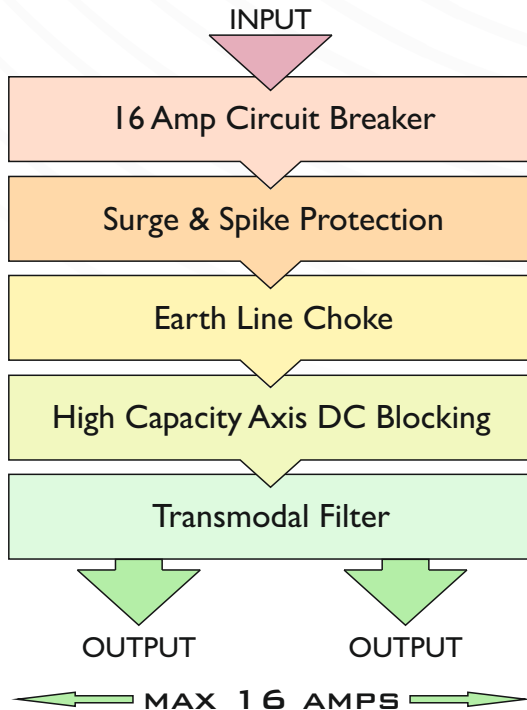
SUBSTATION LC  
FUNCTIONAL DIAGRAM



# SubStation HC

The SubStation HC (High current) complements the LC, providing 16 Amps continuously across its two outlets for high peak current loads such as amplification. A high capacity Axis circuit is complemented by a heroically constructed Transmodal filter. Using proprietary custom wound components, kilos of OFC copper foil and premium capacitors, the SubStation HC effortlessly tackles the very thorny problem of effectively cleaning a high current power supply without compromising dynamic performance.

**SUBSTATION HC  
FUNCTIONAL DIAGRAM**



# SubStation Axis

The SubStation Axis provides a more economical third option. Where the mains waveform is not perfectly symmetrical in energy content a DC component will be present. This can lead to acoustic hum and reduced performance from connected equipment. A high current version of the ISOL-8 Axis circuit blocks any DC. Four outlets supply a continuous current capability of 16A across the unit with a suitable mains connection. The SubStation Axis is eminently suitable for lifting the performance of all high end system components.

SUBSTATION AXIS  
FUNCTIONAL DIAGRAM

