# iota Signal integrity Series.

#### iota Si

This new range of products is designed and hand built here in the UK, these products offer a combination of excellent sound quality and value for money.

The range initially consists of three products, a line stage preamp, with four inputs, a stereo power amp, with separate external power supply, and a stand alone phono stage for both MM and MC cartridges.

All these items are housed in black anodised aluminium enclosures, and use standard single ended RCA phono inputs, all are available with ether a silver or black 8mm thick front panels, and both options are available at the same price.

#### The iota Si pre amp

This pre amp is a passive device using a high quality dual mono stepped attenuator, this offers 24 steps to select the individual Vishay/Dale precision resistors to set the volume. Input selection for the four line inputs is by relay switching, and as with the volume control this is manually operated by front mounted rotary selector switch.

#### The **iota Si** power amp

This stereo power amp is a solid state device built around the renowned LM3886 devices, conservatively rated at 68 watts, and able to drive 4 ohm loads with ease. The amplifiers large power transformer is located in a separate enclosure in a matching finish, and this is attached to the power amp by a substantial umbilical power cable.

#### The **iota Si** phono stage

This phono stage is a self contained single box design, with on-board power supply mounted in its own internal screened enclosure, this ensures the highest signal quality and accuracy from either **MM** Moving Magnet or **MC** Moving Coil cartridges. The phono stage is designed around high quality integrated circuits (IC's), to allow upgradeability and long term system compatibility these devices are mounted in gold plated sockets.

## iota Si Phono stage

The iota Si phono stage is a self contained single box design, with its own on-board power supply.





iota Si Phono Stage.

This product forms part of a new series of electronic products called the **Si series**, these are the latest in a long line of specialist audio electronics that we have designed & manufactured here in the UK since the early 1990's. Previous products have included a number of phono stages, both fully balanced designs as well standard RCA phono units like this latest, the **iota Si phono stage**.

### So why Si ....?

The **iota Si phono stage** is designed to maintain the highest quality and accuracy from either **MM** Moving Magnet or **MC** Moving Coil cartridges, and to ensure the maximum performance from conventional single ended sources we take **Signal integrity** (hence **Si**) very seriously. As a single ended phono stage this unit can be used with any turntable that has standard cables terminated with RCA phono plugs.

In order to address **Signal integrity** some of the following main issues to ensure optimum performance, these are crosstalk, distortion, signal loss, and power supply noise.

To combat these issues in our **iota Signature Reference Balanced** phono stage, we have the major advantage of the action of common mode rejection for the suppression of noise, distortion, and signal loss, and cross talk is addressed by using very careful circuit design and dual mono construction, and the suppression of power supply noise by the use of a second separate box containing the fully regulated dual mono power supply.



iota Si Phono Stage internal view

To address issues that could impact upon **Signal integrity** in the **iota Si phono stage** we adopt many of the same principals of design and construction that we employ in our flagship balanced phono stage, however as this new unit is a stand alone single box design, with the power supply contained within the main enclosure, we don't have the option of using an external power supply, therefore the high quality toroidal power transformer used for the **iota Si phono stage** is contained within its own internal metal screened enclosure, and we ensure careful positioning of other power supply components.

This product represents a development of one of our long established and time proven phono stage designs, and in this design selected components of exceptional close tolerance are used throughout to ensure the accuracy of signal processing.

The **iota Si phono stage** supports both **MM** & **MC** cartridges with simple switching, for gain and cartridge loading requirements, using high quality DIL switches, with all switches set to  $\mathbf{ON} = \mathbf{MC}$ , all set to  $\mathbf{OFF} = \mathbf{MM}$ . This well proven phono stage design is based upon a series of high quality integrated circuits (IC's). Such devices are used in all aspects & equipment throughout both the recording and professional music industry.

### **Bespoke options:**

It is well documented that all IC's exhibit different characteristics and therefore offer varied sonic presentations, consequently for enhanced flexibility and bespoke system matching, this multi stage phono equalisation circuit has all its IC's mounted in gold plated sockets. This offers the user the option of simply unplugging and easily substituting different combinations of integrated circuits to change the sonic presentation to suit your own taste and system, this is often referred to as "IC rolling", in that different suitable iC's can be exchanged to achieve the ideal system matching to an exact individual customers preference.



iota Si Phono Stage rear panel view.

This feature ensures that the **iota Si Phono Stage** can sonically evolve as your system does. Just as all phono cartridges offer a different sonic presentation so do integrated circuit IC's, so to further support this facility for customers who wish to experiment with alternative combinations, we offer upgrade kits containing different combinations of selected IC's able to offer alternative sonic presentations, we also include all the tools and detailed instructions with each option kit.

N.B.\*\*\* To ensure the safety of the user and our equipment, before the lid is removed to carry out any changes or adjustments within the phono stage, it is essential that the unit is first switched off, and the mains power cable is removed, and that all other standard electrical safety and electrostatic working practises are followed, especially when handling ESD sensitive components.\*\*\*

It should also be noted that not all IC's that are generally available on the market are suitable for use in this particular application in a phono stage, and the use of non specified or approved integrated circuit items can not be supported by **iota-audio-design**.

We appreciate some customers may wish to have the option of different sonic presentations, but not all customers will wish to make these changes themselves, but instead if you provide details of your system and the components that it contains, we are happy to recommend an IC combination of approved alternative IC's, and these can be fitted to your equipment at time of order direct from the factory.

The **iota Si Phono Stage** is supplied in black anodised casework, to ensure the best match to the rest of your system equipment, the option of either a black or silver front panel is available at no additional cost.

#### **Switch off & remove**

the mains IEC cable before making any changes! \*\*\*

**DIL** switch settings.

All switches set to ON = MC

All switches set to Off = MM

iota Si Phono Stage internal instructions