

857 REFERENCE POWER AMPLIFIER

ABSOLUTE POWER



Q&A WITH PHIL MENDHAM, TEAM LEADER OF HARDWARE AND ACOUSTICS AT MERIDIAN AUDIO

Our most powerful reference two channel amplifier has been designed and built to deliver the best possible Hi-Res audio performance from any high-quality passive loudspeaker system.



We posed some technical questions regarding the 857 to Meridian's Phil Mendham...

Need more power? Simply bridge the 857 for a single 1.5 kW channel.

Hi Phil, what is it about the 857 that makes it stand apart from similar products? In my opinion the 857 stands apart because of its audio invisibility. If it's in a system you hear the music, not the product.

Can you tell us a bit about the reasons for the Class AB design? I chose a linear class AB design because I wanted not only the best performance but also the ability to drive any loudspeaker load. I believe that the 857 - an optimally designed class AB amplifier with output stage error correction - delivers this. The error correction gives it Class A performance but without the heat output of a class A design.

Class D amplifiers aren't recommended for capacitive loads such as electrostatic loudspeakers for example.

What is more important, power or fidelity? Both are important, the amplifiers job is to make the signal bigger without adding any sonic effect itself. If I had to choose, it would be fidelity because the



absolute power requirement depends on listening levels and speaker efficiency.

Why did you choose a linear power supply? All switching supplies generate wideband noise which needs to be filtered and suppressed. Linear supplies are electrically quiet and intrinsically reliable so they are the only real choice for absolute fidelity.

What was the overall design philosophy behind the 857? The design philosophy was simple, to create a power amplifier capable of revealing the best performance from any passive loudspeaker.

What is so special about the layout of this product? Would you say the product has a truly balanced design?

The symmetrical product layout achieves an optimal magnetic design. The physical and electrical separation of the two channels gives a channel separation measurement beyond the noise floor of our instruments. The design is truly balanced, both from the input stage through to the internal workings of the power amplifier. If the phono input is used the signal is first balanced before being transmitted to the amplifier input.

Can you explain a bit about the SuperBal technology and what it means in the 857?

SuperBal technology is a reference to the analogue receiving circuitry Meridian uses in premium products. The SuperBal circuit unlike a conventional balanced input presents the same terminating impedance to both the hot and cold wires on a balanced connection. This affords a symmetrical load to a balance pre-amp driving the input, maximising the rejection of unwanted noise. Another advantage of the SuperBal stage is if fed from a conventional single ended input, it generates a balanced signal so maximum fidelity can be maintained within the product.

Which materials did you choose to create the 857 and what kind of results do these have on the finished product? I chose the best audiophile materials and construction techniques to squeeze every bit of performance from the amplifier. The amplifier case is constructed from Aluminium which is of course, nonferrous and so doesn't create a magnetic

interaction with the amplifier. The printed circuit boards are of multilayer gold plated construction. The components are all chosen for sonic performance, rather than ease of construction so a great deal of expert hand assembly and time is required in the manufacture of each amplifier channel. Some component highlights are:-

- 4 x 10000uF Nichicon premium grade capacitors are used per channel.
- Thin film non inductive emitter resistors are used in the output stage.
- A massive high mass (over 10kg), low noise toroidal transformer is employed with multiple secondary windings for each channel and auxiliary circuitry.
- 4 WBT output terminals for pure signal transmission.

Can you explain what the lower output impedance means for the 857? The output impedance of an amplifier is a measurement which gives an indication of how much control the amplifier can exert over a loudspeaker. The lower the output impedance the more control. This is really essential for accurate and fast bass

reproduction and the reproduction of more subtle signals during loud audio passages. The 857's error corrected output stage gives a class leading output impedance of around 20m Ohms which enables it to deliver of thunderous bass overlaid with subtle detail.

What are the benefits of the lower noise?

A low noise floor allows us to hear more detail in a musical presentation, but that's not the whole story. We aren't very sensitive to random noise. It's all around us. If the noise from the original recording is played back accurately it will further fade into the background allowing even more of the musical nuance to be revealed. The 857's total lack of colouration and wide bandwidth ensures this is the case.

Is it possible to get more power out of the 857 for demanding applications? The 857 has a huge power supply and so for the most power hungry speakers it can be connected in bridge mode to give well over a kW of power into 8 Ohms.

Will it stay cool in a rack?

The 857 has large internal heatsinks which would normally be sufficient for most thermally hostile. To counter this the 857 has two banks of three fans which can deliver forced air cooling if required. They are electronically controlled and deliver the amount of cooling necessary for seamless operation.

How easy is it to integrate the 857 into an existing system? The 857 can easily integrate into any system. It has balanced and single ended inputs with industry standard input impedance and sensitivity. It is available in either a standalone or as a rackmount variant (4U high). It features touch sensitive control or can be automated via a trigger input.

For further information about the Meridian 857 Reference Power Amplifier, please visit www.meridian-audio.com/products or contact your Meridian account manager.

