

Quiescent T100SPA stereo power amplifier

Jason Kennedy



In the world of power delivery, it has long been recognised that reducing noise is the key to better sound quality. After all electrical power is the lifeblood of any piece of audio equipment and its condition will inevitably affect the sound. Likewise in streaming audio more and more manufacturers are realising that noise is the limiting factor, it's a core reason why streamed audio doesn't always sound as good as it should. When it comes to amplifiers however, where power regulation has been the main means of smoothing out the problems in the electrical juice, the realisation that the main sources of noise need to be addressed more comprehensively seems to be less well accepted in most quarters.

Quiescent realised that radio frequency interference (RFI), electromagnetic interference (EMI) and vibration are major factors in the sound quality of an amplifier. These two pernicious sources of bad sound are everywhere, ever-increasing and evidently not helped by circuits based on old technologies that have been refined but not overhauled over time. Although other technologies are available, the best-known exception is Class D, where switching power supplies have taken over from the established linear alternative but switched mode power supplies (SMPS) have their own problems. This type of supply is found in virtually every household appliance today because it's cheaper and more efficient, but it also produces huge amounts of noise that pollutes the mains that supplies our systems. >>



It's a substantial beauty where every conceivable means of keeping noise and mechanical vibration at bay has been employed.



» Transition

Quiescent is the butterfly that metamorphosed from VertexAQ, its MD Nigel Payne (interviewed in issue 196) decided to take the anti-noise tech that was developed under that brand and build it into far more serious and impressively housed components. Quiescent makes a range of devices that are designed to reduce noise and microphony in an audio system, these include loudspeaker modules, balanced mains supplies and a wide range of cables. Many of these are updated versions of the VertexAQ products yet thanks to superbly machined casework look totally different. What's brand new to Quiescent is this range audio electronics, of which there are two power amplifiers – one essentially a doubling of the other into monoblocks – and a streamer.

The T100SPA is Quiescent's stereo power amplifier and it's a substantial beauty where every conceivable means of keeping noise and mechanical vibration at bay has been employed. On the outside you can see that the heatsinks are custom made with cooling tubes running down either flank. Look inside these tubes and there is a helical shape cut into the wall, this is done to break up vibration and differs in each of the 16 cooling tunnels. The top of the

chassis is not aluminium, but a composite material called Trespa, they use this in order to avoid creating a Faraday cage which traps RFI produced within the amplifier. This may be the reason why components with non-metal cabinets often sound more relaxed and natural than the conventional alternatives.

Inside this 27kg lump, things get more interesting not least by the virtue of the fact that most elements have their own internal casings and the power transformer has a cap on top of it that forms an absorption matrix. This asymmetric plate is designed to do three things: absorb high frequency noise, disrupt the field around the transformer and kill RF in the bolt that fixes it to the chassis. The cases elsewhere are not metal but are lined with an absorption material to stop interference getting in, they contain Audio Note (UK) Kaisei capacitors for the power supply, DC blocking devices, stacked rectifier bridges with anti-vibration treatment and anti-reflection devices to reduce HF noise. There is only one pair of MOSFETs for each channel, presumably this avoids the timing issues around precisely matching with multiple devices. They produce 130 Watts per channel into eight Ohms which goes up to



EQUIPMENT REVIEW

Quiescent T100SPA

» 200W when the impedance halves to four Ohms. Not a huge number of Watts for the money but this figure is not an indicator of quality, and that is far more important than quantity as you will be aware.

Back panel connections are very high quality WBT types, specifically that brand's Nextgen Ag silver series where metal is kept to a minimum. The speaker cable terminals are from the same range. There are two extra connections on the T100SPA in the form of an RCA socket and a binding post, both of which are provided for grounding purposes which is a Quiescent speciality, I suspect that this is another area that we will see increase in popularity in the future.

As a mouse

It is immediately obvious that the T100SPA is a quiet amplifier from the moment you press play, I was genuinely surprised by how much quieter it is than pretty well all the other amplifiers I have used in recent times. Modern solid-state amplifiers are all pretty good in this respect, none of them hiss or buzz, but this is not as important as the noise floor underneath the music they reproduce. That's where all the fine detail is hidden in many amplifiers. You don't hear it as noise rather it is perceived as coarseness, as a lack of nuance, essentially as a mask to the things that make an amplifier sound transparent. What you get with this amplifier is a clean yet not clinical sound that lets so much detail through and presents it in a totally natural and effortless fashion.

The second thing that hits you is that there appears to be limitless headroom, which is not usually the case with a 130W amplifier unless it's driving 96dB/w/m loudspeakers, e.g., speakers that do not need more than a few Watts. The Quiescent achieves this with Vivid Kaya S12s (87dB) which are not very big, thus not theoretically capable of high sound pressure levels. In fact, it did it with all the speakers I tried including Bowers & Wilkins 802 D3s with their tricky low frequency load. This, one suspects, is because there is so little noise being amplified along with the signal, it gives such a strong sense of ease that the normal cues about loudness, which is essentially perceived distortion, are just not there. This degree of calmness is very rare and usually only achieved with huge amounts of power.

Illumination

The Quiescent makes other amps sound hurried, anxious to get through the music to the next track, and this sense of propulsion can be exciting and entertaining with certain types of music, but it is ultimately a colouration that gets in the way of transparency, reducing it to this degree is quite a revelation. It opens the music up superbly, revealing the depth and dimensionality of the voices and instruments whilst allowing each to be fully expressed, the calmness of the electronics allows the energy of the music to dominate proceedings. I also love the way it reveals layers in good

recordings, there are far more than expected in many recent releases.

There are two switches on the back of the T100SPA, one selects between XLR and RCA inputs the other turns the LED in the power switch on and off. I was encouraged to try the latter and was shocked that getting rid of one tiny LED opened up the soundstage so dramatically and increased the sense of ease. I guess you need an indication that the amplifier is on but never felt to turn the LED back on.

Timing is also a strongpoint; there are a number of calm and relaxed amplifiers around that trip up on this critical front, more power often seems to undermine nimbleness and this may be why the T100SPA has a modest output for its class. Whatever the reason the groove was utterly delightful on so many tracks that it was easy to get carried away, this presumably because there is so little noise to blur the transitions between notes and because it has more than enough power to control the loudspeakers in use. It also delivers a huge amount of detail from familiar recordings, stuff that had literally never surfaced before, even on large systems, the shimmer of bells, the timbre of acoustic instruments and voices and the ripples in low bass on favourite pieces.

Audio cake

Quiescent have got to the crux of what it takes to make a truly revealing and even-handed amplifier in the T100SPA. Don't look at its power rating and think you need more, listen to its effortless control of the loudspeaker, and wonder why you would ever need more. That the build quality is also premium grade is the icing on a very tasty audio cake, if I had the funds there would be a real danger of investing in an amplifier that would make so many others sound crude. As a reviewer it would be a disaster. +

Technical specifications

Type Solid state stereo power amplifier

Analogue inputs One pair WBT nextgen Ag silver single ended (via RCA jacks), one pair WBT nextgen Ag silver balanced (via XLR jacks)

Analogue outputs One pair of WBT nextgen Ag silver speaker taps (via 5-way binding posts)

Power output 130Wpc @ 8 Ohms, 200Wpc @ 4 Ohms

Frequency response 0.5Hz–600kHz (-3dB)

Sensitivity 1.6V

Distortion 0.03% at 24W into 8ohm, input 1kHz

Signal to Noise Ratio 120dB

Dimensions (HxWxD) 140 x 440 x 400mm

Weight 27kg

Price £20,000

Manufacturer Quiescent Ltd

🌐 www.quiescent.co.uk