

Nigel Payne of Quiescent

by Alan Sircom



Quiescent might not be a name that trips off the tongue just yet, but bear with us; the company took the original concepts of Vertex AQ and has developed them for the 2020s. We spoke to Nigel Payne of Quiescent about the science involved, R&D, and how to extract the most from any good audio system.

AS: Quiescent means ‘tranquillity at rest.’ Was the name deliberate or a Freudian slip?

NP: When we design systems, our fundamental principle is that all components are not at rest. Each active or passive device in a circuit, whether it is a transformer or speaker driver unit, output transistors,

capacitors or even microprocessors, actively adds to the musical signal. Our goal is to ensure that the system is invisible to the listener, and our decision to name ourselves Quiescent was a deliberate consequence of that design philosophy.

You are a comparatively new company. What was the motivation for starting Quiescent?

Quiescent was founded in 2017, but our roots go back to the founding of Vertex AQ almost 21 years ago. We felt that Vertex AQ had run its course and opted to form a new company that leveraged our knowledge of electronics and mechanics combined with state-of-the-art computer-aided design and manufacturing techniques. In creating Quiescent, we have established a brand recognised for technology leadership, world-class products and an innovative approach to radically improving the audio experience.

What are your scientific, technological or audiophile backgrounds?

I began my career studying particle physics and electronics at Leeds University back in the late-1980s. That led me to model noise and vibration, work on high- ▶

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► frequency systems, and program low-level code processors. I've taken this experience and applied much of what I've learned to my obsession with audio reproduction.

But Quiescent is made up of a team of talented people that design, build and service our products. As an example, John, who was a founding director of Trichord Research and worked at Roksan during its golden years, comes up with all sorts of innovative ideas. Without enquiring minds, a refusal to accept the normals and a determination to solve complex engineering challenges, Quiescent would be just like any other audio manufacturer.

How has Quiescent been affected the current pandemic?

Like everyone else, we were very concerned for the safety of our customers, employees, friends and families. The enforced lockdown was challenging but we seized the

opportunity to listen to our customers, suppliers and dealers to understand what they liked about Quiescent and what they wanted to see us focus on.

We are now very aware of customer perceptions and their desire to improve their listening experience. We decided to keep things simple by focusing on what we believe we can do better than anyone else. This approach has led to significant growth for the company and we are looking forward to maintaining this momentum.

What is the best first step to experience the Quiescent effect?

I think that our new Apex family of couplers would be the best place to start. For example, the Apex40 permits buyers to immediately benefit from significant gains in musical performance at an affordable price. Our Peak Speaker Connection System enhances the experience to unprecedented levels.

Is an 'all roads lead to Rome' approach good, or is there a recommended roadmap?

Each system is unique, so blindly upgrading one with Quiescent products isn't something we recommend. Once Apex couplers and speaker modules are in place, it becomes more like a murder/mystery novel. You know something in the system is responsible for the intermodulation we can hear, and you have to look for the clues. We are training our dealers to detect opportunities for dramatically improving customers' systems by applying our products. ►



► **Is a cheap system + Quiescent better than an expensive system without?**

We have tested our products on a wide range of systems, and the results are always the same. I demonstrated to Soundcraft HiFi (Kent) how an all-in-one box streaming solution for just over £4k can be made to sound like a system that could have been many times more expensive. We added couplers, speaker modules, one Peak mains module with leads and our DATA internet cable. The Quiescent kit has a recommended retail price of just over £10k, and all agreed that the £4k all-in-one box was performing as well, if not better, than many separate systems costing a more lot than £14K. We also added Quiescent's modules to the Soundcraft HiFi reference system, which costs over £45k, and again witnessed a massive improvement in musicality, pace and timing that is well worth the extra investment.

How do you develop new products in this sector? What R&D and testing do you perform?

Before starting development, one of the questions we ask ourselves is, "what component or subsystem is causing the most microphonic noise?" We begin things with no hurry to create a marketable product allowing us to test our theories with a lot of empirical back and forth. The next question we ask is, "does it work?" Around 50% of our R&D leads to a positive outcome, but we follow that with yet another question: "can we clearly explain the problem we are solving and why the product works?" Only at this point would we begin the design using advanced CAD. Manufacturing is also computer-driven up to the final assembly and finish. While we measure our results meticulously,

we believe that auditioning is the best way to evaluate success. We listen extensively to new products, and it has to pass a final test. Is it musical? Is it profound? One of our core values is that we will not launch products that provide merely marginal gains.

How long does a product take to come to market?

Of course, this really depends on how complex the product is. Our T-Series streamer took around three years from inception to launch. The recent Peak speaker modules have taken just over 11 months from the prototypes to the final product. I think this was a small miracle given the pressure of getting a patent submitted, but the team knew we were on to something significant, so they were determined to get through all the major steps as quickly as possible.

Do Quiescent products only work with specific products or price sectors?

If you want a quick answer, then it is "no." We have customers with all varieties of ►



- ▶ electronics reporting that our products completely open up their systems. Our new retailer model will provide us with a lot more data on this, and we're excited to be working with them.

Have you found anything that doesn't benefit?

Again, the short answer is "no" but I remember when I was so convinced that our mains modules would work in an active speaker system that I thought the audition would only need thirty minutes. I was wrong, but we experimented with finding the right combination, and the improvement was profound. This takes us back to my point about detective work...

How are the products made? Are they built by hand? Where are they built?

All our products are manufactured using high-grade materials and state-of-the-art CNC techniques. The tolerances are incredible, and our main components fit together as if they were one solid block. The bolts are the only give-away that they are made up of separate panels, so the acoustic resonance is as near to zero as we can get it. The modules are a single block, giving us the inert chamber we need for the embedded technology. Our couplers are made using advanced 3D-printing, using an inherently absorbent material.

We manufacture predominantly in the Midlands, with final assembly done by hand in Wales. Often this is the most complex part of the process, but our modular approach allows us to speed things up, permitting us to target a period of two weeks from order to delivery. Our front-end electronics are larger, more complex components. We've spent the last year preparing our supply chains and back-office systems to support such complexity. The T-50SPA amplifier uses over 300 parts, and we knew that we needed to implement

inventory management, computer design and assembly guides for it to be viable.

Does someone have to use your electronics to benefit?

Many of our customers use electronics from other manufacturers, and we don't discourage that. We often grow very fond of our electronics, and Quiescent's modules and couplers are an excellent way of boosting performance without replacing part of or an entire system. The ultimate, of course, is when we deploy our technology right inside the electronics.

Does using the products require changes to the system's set-up in terms of speaker placement, etc.?

That's a fascinating question. We have seen customers make changes to their speaker placement because, before installing Quiescent, they had spent considerable time on setting the positions based on their current system performance. A good example is that people often move their speakers off-axis when they find harshness or brightness. This is often the result of inter-modulated signals. By reducing the noise floor and microphonic generation, we minimise inter-modulation (often perceived as electronic distortion), and the speakers can be put back into the on-axis position. As with all systems and customers, there is no one-size-fits-all.

What is in the pipeline?

The T-50SPA stereo power amplifier is the first major product adding our patented technology, QPower, directly to the toroidal transformer. The results have been game-changing, so our ambitions for Quiescent are growing. We have two major projects in the works, monoblocks and a pre-amplifier. Beyond that, we still remain firmly fixed on placing Quiescent technology in between the sub-systems in electronics so more will come. As such, we will soon be announcing a further manufacturing facility at another location in the UK. +