

Rupert Neve

The man who helped define the industry and set the parameters for the appreciation of performance and quality talks shop.

ZENON SCHOEPE



HE'S ONE OF THE most well-known names in professional audio and has become strongly associated with all that is great and good about sound. His is a legacy that extends back to cover many of the defining quality moments in audio. He started the Neve companies in 1961 and while many would have hung up their soldering iron following the acquisition of the operation in 1985 by Siemens, Rupert Neve in his new life-after-Neve actually went on to do some of his most memorable work. There was Focusrite with the fabulous Forté console and that era-defining outboard range; consultancy with Amek that resulted in the incredible 9098 console (with Graham Langley) and a range of outboard (anyone remember that first product the Medici?) and contribution to other Amek desks. He moved to the US in 1994, consulted for Summit Audio (Element 78), Taylor Guitars (instrument preamp) and launched Rupert Neve Designs last year with its Portico range of modular outboard.

All this from a man who is 80 and has two great-grandchildren. He was born in Devon, UK, lived his early years in Buenos Aires, and served in the Royal Signals during the War. After the War he ran a PA and disc recording business and designed and built his own equipment. Desk design started with Musique Concrete composer Desmond Lesley with the breakthrough coming with placements at London's Recorded Sound and Phillips Records. The rest, as they say, really is history.

What is special about Rupert Neve Designs products?

Two parts, I think, to this answer: the first is simplicity. Rupert Neve Designs Inc. products are based on the experience I gained in the early days — not only in

terms of sonic quality but also in reliability. One of the most powerful keys to reliability is a low component count — there is less to go wrong! Circuits had to be simple.

Simplicity of the basic designs is the first part of the answer. From my earliest years I was taught that an Engineer is a man who can do for Tuppence what any fool can do for Sixpence. This involves understanding what really needs to be done. What does your client — the person who pays the bills — actually 'need' as opposed to 'want'? How could I meet his needs in the most cost-effective way? This does not necessarily mean it's cheap!

It was both an engineering and an artistic challenge 40 years ago and it is still so. We are constantly looking for ways in which we can place powerful tools into the hands of the artist — you, the client — that will give you creative fulfilment.

My early designs addressed the issues of specialised EQ; of getting the signal from source to destination without loss of quality, without adding noise or distortion and continuing to deliver the highest quality signals reliably under extremes of working conditions, such as temperature and humidity.

Transistors were just making their appearance. They tended to be unreliable and suffered from huge spread of performance figures. If they got hot they could all-too-easily enter a thermal runaway mode and blow up! They were noisy and, when used in some of the manufacturer's published designs, they produced their own peculiar sound (crossover distortion), some of the reviewers even hailed this as the new, 'accurate' sound of the future!

The second part of this answer is, I think, innovation.

I've spent many years designing consoles for the great names of our industry who do know what they need and are able to evaluate sonic quality to greater depth than any test gear can measure. The music recording industry has developed sophisticated and cost-effective methods of controlling, editing, storing, marketing and reproducing sound, much of which, has been achieved at the expense of quality.

Talented people have been buying low priced gear with inadequate performance, thinking that this was the norm and are often left wondering why their recordings lack depth and perspective.

In spite of this basic loss of 'musicality' in the digital domain, we have been able to reveal and enhance hidden depths that lie embedded within a recording.

When it's processed carefully in analogue, not only professional artists and producers but any appreciative listener, not necessarily knowing how to express audio 'needs' in terms of technical specs, can hear and enjoy the difference!

With such an extended backcatalogue, how do you think up new products?

As an enthusiast for more than 65 years and in the fortunate position that my hobby is my business. The ideas often spring from something I've wanted for myself or have arisen from excitedly sharing ideas with 'golden-eared' friends.

I'm always searching for ways to make something

sound better — perfection is a huge field; there's no 'ultimate'. Most designers would admit that the great difficulty is knowing where to stop. You have to work to an agreed spec and when that is met, your design is complete.

I'm convinced that the field of sound is infinite in its complexity. There's always more waiting to be discovered than we ever dream of. Created by an Infinite Creator, we want to achieve perfection, compete in the race, climb the mountain, paint the picture; the motivation of creativity, the ecstasy of accomplishment, is always there.

So we press on ever onward and upward, seeking fulfilment in sound as our art form and our mission but knowing that what is good today will be better tomorrow!

How do you feel about your name still being associated with products you have nothing to do with?

Astonishment and disgust that humans who are gifted with their share of creative talent should want to misuse their abilities and abandon any concept of integrity by copying the designs of others!

The only people who have any rights to my original designs are AMS-Neve who acquired them under my original sale of the Neve Group of Companies in the mid 1970s. There are several manufacturers who have, under the un-watchful eyes of the recent ownership of the company I founded, been left free to make 'recreations', knock-offs and un-inspired products that claim some connection with my name to obtain credibility.

I should say that a few of my original staff are still working with AMS-Neve and I have been happy to support them and the Company with technical information as, under new ownership, they start now to reissue some of the originals and track down the violators.

It's an unfortunate fact of life that down the ages in any field of human endeavour, be it literature, art, music or finance, there have been those who prefer to copy, plagiarise or commit acts of forgery.

Does digital draw you or do you remain an analogue man?

For many years we've been told about wonderful digital quality. It's a wonderful medium certainly, for storing, editing and delivering sound but resolution is greatly inferior to analogue — a bit like comparing film photography, where resolution is probably limited mainly by lens quality, with pixels where more is always better but expensive (and slow if you are trying to receive an email!)

However, digital is here to stay and seems to get away with ever lower resolution. But I've heard nice sounding recordings that have been up-sampled from CDs. We have found analogue ways of counteracting some of the worst sounding digital recordings. For example, by restoring sweetness and apparent resolution. Some of you have seen (or heard!) this in the Portico Range.

The more serious impact of low grade sound reproduction is that, without a real Point of Reference, the internal data bank you build up when you go to concerts, listen to real instruments and voices, is missing and you just don't know how to distinguish between good and bad! At least two generations have grown up without a perspective because their only access to music, either as entertainment or as an art form is via the ubiquitous Compact Disc.

As long as 30 years ago, famous 'golden-eared' friends demonstrated that they could perceive the effect of frequency response anomalies as high as

and even beyond 50kHz. Research has shown that when we hear reproduced sound that either lacks musical frequencies we expect to find there or that introduces artefacts that ought not to be there, the brain radiates electrical activity of the sort associated with frustration and even anger. This electrical activity can be measured. Many questions arise as to whether such sound can do us lasting damage or can result in unexpected patterns of behaviour. It's a vast subject and not one to be argued here. So the answer to your question is 'I don't want to be guilty of harming the world: I'm an analogue guy!'

Have you changed your mind about any design principles over the years?

Yes, but more about how to achieve my objective than what to achieve!

I entered the music recording field in the early 1960s with fear and trembling. Would my designs be good enough? Flat frequency response to 20kHz and reliability of transistor circuits were my first concerns. After all these were modular amplifiers that would be cascaded to form a mixing console and any weaknesses would be cumulative. Transistors were pretty new and had a bad reputation. Famous companies had delivered audio gear that simply went into thermal runaway when they got too hot!

As consoles became more complex we had to pack more and more circuitry behind the panel. Amplifier efficiency became important as we reduced size. We designed push-pull amplifiers that were no longer Class A. Oh yes, not every console with my name on it embodied the sacred 'Class A'. But they still sounded good!

There came a point when we realised that the magical octave above 20kHz was as important as that below it. Extended frequency response became the aim, together with better noise and always with very low Total Harmonic Distortion. That meant new transformers. A lot of work went into designing these and we achieved a full response to over 200kHz.

More features were wanted with the consequent need to use Integrated Circuits to save space.

Later, when as Consultant to Amek, I produced the Pure Path range of outboard modules that had incredibly low distortion and noise and with excellent calibration accuracy, they could be considered in almost every way, as about as good as it could get. There are many users who love them but, strangely enough, I was never myself enthusiastic about the way they sound. It would take more space than is feasible here to discuss the design details.

Continuing the upward path, I am fortunate here in Wimberley Texas, to have Billy Stull as a neighbour (www.legendaryaudio.com). Billy runs a riverside mastering studio in the most picturesque setting in this lovely Hill Country village. He has the most amazing gift of sound perception that I have ever come across. We worked together on mastering gear — the object mainly, is to make great music recorded digitally, sound sweet and lovely. Between us we produced the Masterpiece, a substantial piece of rackmounted, very accurate equalisers, compressors, phasing circuits and other effects which go a long way towards achieving our goal! Rupert Neve Designs started trading last year and the Portico range of modular amplifiers based on what I learned working with Billy, is the first new embodiment of simple circuits that sound better.

Yes, there have been circuit design changes but not really a change of principle!

What were the significant technological advances over the years that changed what you were able to build?

Having got somewhat carried away by the last question, I think the answer to this one has largely been covered.

However, all my designs are characterised by the use of transformers. In my early days I was fortunate to work with engineers and designers of the 'Old School' who taught me how to design high performance transformers ranging from very small ones for microphones and hearing aids to output transformers handling several kilowatts of audio power. It is essential in any audio design, to exclude any unwanted signal. Not only noise and crosstalk, but Radio Frequencies, hum and its harmonics and associated spikes. Transformers maintain total isolation, providing the ideal way to prevent ground loops, by which such artefacts are often introduced. Together with a completely closed ferrous case they do a vital job in excluding those unbelievably microscopic interfering elements that the experienced human ear can perceive.

Significant technological changes? Solid State devices: transistors in the early days and later ICs that enabled amazing packaging of high performance audio circuits.

Improvements in transformer steel have been a great help in making better and more affordable transformers. Availability of very high performance switched mode power supplies has enabled us to improve isolation between modular amplifiers.

Why no valves?

Valves? What a good idea! We're working towards them again, strangely enough! The more desirable qualities of the big triodes are being achieved with semiconductors. Valves suffered from short life, microphony, inefficiency, and, well, the list is well known. It would be fun to calculate the heat and power that would be generated if valves were used in a module of the Portico range.

The modularity of the RND products permits interconnection to create a 'desk' but are you tempted to build a console?

As we all know, the monster recording console is, sadly, a product of the past. Yes, I am often tempted to build a console. However, the console of the future will be a very different beast that allows much greater flexibility, freedom from massive and costly redundancy, and provides for monitoring of the several present formats as well as future ones.

The Portico range will shortly include simple mixing units and these will be followed by the first of a new breed that I can't say too much about at present. However, it won't be long! Bear in mind that within our first year six new products will have hit the production lines!

Which of all your designs are you most proud of?

I think the famous Montserrat console I designed for George Martin would qualify together with the Amek 9098 designed on similar principles. But please ask the question again in about 18 month's time!

Most people would have stopped designing audio equipment by your age, what keeps you going?

What else would I do? There are things that I want to do not directly related to pro audio — training for the Media, for example. With a magnificent team of young engineers, and colleagues, and the support of my wife, Evelyn who has put up with my wild dreams for 55 years, I am working towards it. ■