

INTERVIEW

with

Richard Newlove

**GEORGE
SELL** meets
the man
behind Amina, the
invisible speaker
specialist now raising
its profile in the new
homes market



There aren't many stories in Show House that involve military helicopters, international fugitives and cutting-edge technological innovations. But the career of Richard Newlove, managing director of Amina – a Cambridgeshire manufacturer of invisible loudspeakers – has encountered all these things and more.

Newlove graduated in electronics from Newcastle University in the early 1980s. He says: "From there I went in to the oil and gas industry for a little while, electronically measuring the value of oil and gas in pipelines. Then I came to Cambridgeshire, about 30 years ago, and worked in the semi-conductor industry, supporting these new things called semiconductors – getting them out there into industry and implementing the development systems that you need to do that. I was particularly involved in looking at computer-aided engineering design, which is very common today – being able to simulate things with electronics, without having to actually build them."

These new and in-demand skills led Newlove to a company called Mission, a hi-fi brand, based in

Huntingdon. "The guy who owned the company was very into technology and he wanted to get into computers as well as audio equipment," says Newlove. "I joined him on the technical side looking at PCs – this was right at the birth of PCs – and started to develop an integrated laptop and printer solution, which was probably doomed when you look back on it because it was too big and heavy! It was an exciting time though, and we worked with some real pioneers of the industry. The company was bought by Polly Peck International two weeks before the whole thing collapsed and Asil Nadir fled the country. The company never got any money but we did manage to split the profitable audio company away from the computer side and I stayed with that company, which made a big mark in its sector and has stayed there ever since."

Now we take a little detour to those military helicopters I promised you. "Around this time, the Ministry of Defence had been looking at helicopter simulators – they wanted to recreate the noise of a helicopter in a training simulator, which is basically a big metal box. They soon discovered that putting a speaker in the corner wasn't enough – a helicopter makes a massive amount of noise. What they did was take a big, powerful drive unit, recorded a helicopter sound, and played it by using a voice coil and connecting it to a one-metre rod to the side of the metal box, on all six sides. The recording would then shake the box, and they found that it made a huge amount of sound," says Newlove.

"Somebody then inevitably put in a Madonna tape, and they realised it still sounded like Madonna! It wasn't an overlapping mish mash of sounds that you couldn't clearly hear. This was the birth of what we now call the distributed mode speaker. What they were actually doing was replicating what happens in a musical instrument such as a violin, a piano or a guitar," says Newlove, who explains: "The traditional moving coil loud speaker is something very different from what happens in real life. Real life sounds, whether it's a musical instrument or a car engine, are all about vibration. The violin works because the energy from the vibrating string is guided through the bridge to the body of the instrument, which vibrates tiny amounts over its whole surface area. And it's that which becomes a really powerful device." ▶





Incidentally, one of the demonstrations Newlove does when educating architects and designers about Amina's products is to use a tuning fork: "If you hit one and hold it in mid-air there is very little sound coming from it. But as soon as you put it on the table, the table vibrates and that's when you hear the sound."

But back to the story. "In the early 1990s the MoD started to promote the concept to commercial companies, but they did it in a fairly basic way with a one-metre aluminium panel and everybody laughed at them, saying 'how are you going to get that in to a laptop?'. The idea obviously had to be scaled to a proportion that the consumer could use. It went on to the backburner, but when Mission took itself out of the Polly Peck administration it very quickly bought the speaker brand Wharfedale, reversed itself into it, and changed its name to Verity. The MoD spoke to the technical director at Wharfedale, who is a keen musician. He went out to see them and made the connection between what they were showing him and a musical instrument, which is scaleable, for example, a double bass and a violin work the same way," says Newlove.

"He persuaded the group to license the technology from the MoD. They then played around with it for a while and got a mathematician to work out the equation that reveals how a vibrational surface makes sound. That same equation is used today, in conjunction with computer modelling, to develop real products. You can now use a computer model to tell you exactly how a surface of a certain size and a certain material is going to behave."

So the company had a potentially great product on its hands, but there were problems looming: "Verity launched the technology, floated on the stock market in early 2000, the shares went ballistic as part of the dotcom boom – from 50 pence to over £20 in a few years – and it ended in tears later on. But the technology was there: non-directional speakers, using the same technology that means a violin can fill a concert hall but the violinist is not deaf. We developed the first commercial applications of this – very crude ceiling speakers and picture panel type speakers – but we realised that the technology really worked, even though many people in our industry were blinkered and didn't believe in it. The main problem was that the brands that Verity had couldn't generate high prices; they weren't in a high enough

price bracket. Therefore the components we could use to make products for those brands were fairly crude, meaning they didn't work particularly well."

This was Newlove's cue to strike out on his own and start Amina: "We knew that if we threw some money at it we could make a really good product. So I left the company, which by this time was called NHT, licensed the technology from them, and focused solely on this technology. Our angle was not just to make another consumer loudspeaker but a really high performance product that would fill a little niche. We initially targeted commercial uses, and spoke to architects and designers who were fulfilling needs in boardrooms, receptions, restaurants, churches and so on, who needed something that didn't look like a loudspeaker. One of the great things about this technology is that it doesn't need to look like a loudspeaker – you can paint it, it can be any size you want, you can make it look like a ceiling tile, you can put a projection surface on it, you can put a picture on it.

"So we set out to make custom-built high performance products. A couple of years later I was speaking with a German architect who didn't want to use a speaker where you could see a join between the speaker and the wall. So we developed a product that could be plastered over, and the plaster

became the soundboard. We said, 'if it works pay us, if it doesn't leave it there'. That installation resulted in a delighted customer and is still there to this day. That was the start of most of the work we do today, which is making products that are built into walls, ceilings, cupboards and panels, so that they disappear entirely."

Then came the move into the homes market: "After a few years we realised that the residential market had changed, and at the high end people were interested in multi-room audio. This was a great new market for us, because if you are putting lots of speakers all over a house, you don't really want to be able to see them all. We started doing a lot of education through RIBA to architects, and to interior designers and consultants. We are now speaking to more and more high-end developers, predominantly in central London, where values are very high. Three years ago we were introduced to St George, part of the Berkeley Group, and we put our product in the marketing suite at St George's Tower, which got a very positive response.

"We then went on to equip all 250 apartments in that development with our product, as a surround-sound system. That was one of the first big projects where we dealt directly with one of the bigger builders and its M&E contractor. Normally we are dealing with AV specialists who work with them."

Newlove continues: "The St George project has led to talks with those guys regarding more developments, and with other developers both in the UK and overseas. We'd love to start talking with more mainstream housebuilders, as although we are working predominantly at the very high end of the market, we see this technology rippling down through the market. Home automation has been the preserve of the luxury market, but the likes of Apple, Microsoft, Philips and so on are working in the background to expand their technology and content delivery. They want to lock in more of the home to streaming technology such as iTunes, and there are some really exciting technologies coming out which will allow people to control more of their home from a smartphone – more akin to what's happened in the car industry, with parking sensors, bluetooth and so on.

"Housebuilders will put in more wiring and infrastructure to allow people to have the latest technology in their homes, and I think this is key to the future of the housing market." [sh](#)

