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A Visit to Raidho



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SoundStage! Scandinavia



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There are many manufacturers of high-quality hi-fi in Scandinavia. Denmark has, over the years, been the creative engine, and Denmark is also where we find most of the manufacturers. Speakers have always been the key product and still are today.

One of the most talked-about companies right now we find in Denmark, in the northernmost part of Jutland. We're talking about the speaker manufacturer Raidho. The company first appeared more than ten years ago and quickly gained a lot of attention. However, during the first years they caused both confusion and appreciation.

Behind the company we find Lars Kristensen, who for many years was the international face of the US cable company Nordost, along with innovative designer Michael Børresen, originally a mechanical engineer but later also educated in electrical design - and a lot more.

They got to know each other many, many years ago, at a time when Lars was a salesman for hi-fi. Michael was one of those "difficult customers," one that never was impressed and always said that he really could do it better himself. Their paths parted, but many years later they met one late evening in a line at a hot dog stand. Michael told Lars that he was playing with developing a ribbon tweeter. To Lars that sounded really interesting: "Tell me more!" They soon began a partnership and eventually fully developed an element, and they actually also sold quite a few of them.

This was just the beginning. Michael went on to work on a much more advanced tweeter, and from that the step to a full speaker was not far off. They complemented the unique tweeter with the well respected, but difficult to handle, ceramic elements from Accuton. The premiere series was named Eben (after Lars's wife Iben), and I visited Michael's farm out in no-man's-land in the middle of the Danish countryside to listen to the first samples.

The speaker could do something special, but it was extremely difficult to get it to perform evenly with different types of music -- some cuts were close to unbearable while others sounded sublime.

It was a tough speaker to tame. We tested a model in the magazine *High Fidelity* and, after a lot of work, we got it to play quite humanely. Brilliant in some parts, okay on others, and really not so good with some music. The speaker was extremely finicky concerning amplifier and cables; it was a real balancing act to get it to play.

"We were really far too early with that speaker," says Lars Kristensen. Amusingly, Lars Kristensen also says that those who own some of the early Eben speakers now find that the speakers, together with up-to-date electronics and cables, offer a completely different experience. Maybe the times have caught up with it?

The difficult path

Michael Børresen is a very interesting man. He constantly strives to develop and find improvements, and he is certainly not afraid to take the most difficult paths. Raidho had received a lot of praise but also



Lars Kristensen and Michael Børresen

a good deal of criticism for their first speaker series. Those ceramic units, for example. “It must be possible to do better,” thought Børresen. Building ceramic units is a difficult task, however, as there are some tricky processes that really must function to make the sublime diaphragms. However, he found a company, in the vicinity no less, that was willing to take on the task. The result was a ceramic-aluminum sandwich diaphragm, Ceramix, which is so well made that the normal (quite high) rejection ratio for this kind of production is extremely low.

But that was not all. He also designed an incredibly strong magnet system and put it all together with a sophisticated and unique basket design. Moreover, he went on to refine his tweeter with a new cunningly constructed membrane that increases efficiency.



He has also done quite a lot consulting and development work for other companies, for Michael thinks differently and is constantly challenging the accepted notions. That's the hallmark of a good designer, wanting to be innovative and try to push the boundaries.

The new speaker units resulted in Raidho's C-series, where I tested model C1.1 and was completely overwhelmed by how the little speaker could perform. It gave a musically very satisfying experience, and I reached a point where I thought it was the best bookshelf speaker I'd ever have in my listening room. A couple of months later I got the Magico Q1, but that's another story. It was also about three times as expensive!

Visiting is a must

When testing a Raidho speaker the company is eager to first show the production facilities and all the speaker parts, and they also want you to listen to the whole speaker range and discuss everything you see and hear. That's very positive, in my opinion. The more you know the better. And neither Lars nor Michael are very good at keeping secrets.



Manufacturing space is not huge, but they now produce three times as many speakers as when I last visited the company two years ago. Nearly 1000 pairs per year, I believe. “We do not make so many speakers,” laughs Lars Kristensen, “but we make them all better!” They are all handmade, so each speaker takes time. Plenty of time. They attach great attention to every little detail.

D for diamond

On my latest visit I had the opportunity to listen to the new D-series. D? Yes, the C stood for ceramic and D stands for diamond. Raidho has taken a further step, refined their crossovers with new, specially developed components and the coating on the diaphragms is diamond. Børresen, along with their ceramic-applying firm, found a method to vaporize diamond in such a way that the process is both stable and with a very low failure rate. The latter is especially important, since the process allows the diaphragm to become ridiculously expensive.



I will do a test for a Norwegian magazine of the D1 model; in principle it is the upgraded version of the C1.1 that I liked so much. From what I heard in Raidho's listening room, I have something to really look forward to. The speakers have just landed at my place and are currently, as I usually do, placed close together in opposite phase for a few days playing before I start with the serious listening.

Of the floorstanding models, they had just shipped off the last finished D2s, so I didn't get to listen to it. However, I did listen to the D3, a speaker which I must say went straight to my heart. We all have our own ways to listen, to take on the music we hear, just as special artists can move your inner harmonic strings. I have that, for example with musicians such as Joe Jackson, who writes music I wish that I could have written . . . if I could write music! And the D3 hit the strings inside me in a way that few speakers do when I hear them on a demo. Despite its relatively small woofers it gave a very correct and harmonious body and soul to the music. It was a pure delight.

Big and good

Okay, it was not all diamond -- I also got to listen to the top model, the C4.1. I've heard it before as it has been on display in Munich's High End the last two shows, but nonetheless, it is an extraordinary experience to hear it when it is set to perform at its best in a controlled environment. It is a gigantic speaker, but with that peculiar ability to be able to disappear in the room.

The C4.1 is narrow but very tall. The height is just over two meters -- very tall. Top and bottom are the two bass ports in the form of a kind of acoustical vent. The speaker is symmetrically constructed with two midrange and four bass drivers around Raidho's mid-mounted special ribbon tweeter. Everything is special about this speaker, from the feet, based on the same technology as Nordost's Sort Kone, to the crossover where no compromises are made, to the proprietary ceramic elements with their unique motor systems.



Raidho D-3 and 4.1

Close your eyes when you listen, and you get that lovely experience of being placed in the middle of the action. The small hairs on my underarms rose several times during the session. Lars Kristensen often plays very exciting music. He always has something new to play. Therefore, I try to do the same when he comes over and visits me with cables or speakers. Several times he has found gems on albums I have in my archives, records I apparently hadn't devoted enough attention to. This time, it was the Norwegian singer Ane Brun -- exciting and well produced music that sounded amazing on the C4.1.

One might expect, and I've also had it confirmed, that Raidho is working on a new version of the C4.1 that will come as a D-model fitted with diamond drive units. Judging by what has happened with the smaller models, we really have something to look forward to. However, it won't come cheap!

. . . *Sven Bilén*

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