

# The Voice of Voxativ

BERLIN-BASED VOXATIV IS RAPIDLY BUILDING AN IMPRESSIVE REPUTATION FOR ITS FULL RANGE DRIVERS AND HORN LOUDSPEAKERS. OWNER AND DESIGNER INES ADLER TALKS TO STEVE HARRIS

In one room at the Whittlebury 2011 National Audio Show, Voxativ of Berlin showed its now much-acclaimed *Ampeggio* horn speakers. In another, John Howes was demonstrating his *Voigt Memory*, a lovingly-crafted replica of the 1934 *Voigt Domestic Corner Horn*, into which Howes had installed the remarkable Voxativ full-range *AC-X* field-coil drive units, which are also used in Voxativ's *Ampeggio Due* flagship model.

The Whittlebury event also gave the opportunity to talk to Ines Adler, the remarkable founder and head of Voxativ. I started by asking her how she got a passion for audio in the first place.

"My parents had a big piano, and I loved to simply play on it without knowing anything about it, just banging with my hands! When my parents divorced, they sold it. So I was never educated in playing an instrument, although I'd always loved to.

"When I got older, I simply put some old loudspeaker drivers together and this replaced a musical instrument for me. And I've done this all my life.

"After I'd finished my engineering studies, I worked for Mercedes-Benz, and was involved in the development of diesel engines and engine electronics. I filed some patents on diesel combustion, injection and exhaust gas treatments.

"While researching patents, I found the old patents of Mr Voigt. When I saw the field-coil driver from 1927, the very first one, I said 'Wow, what a nice idea!' I thought it would be great to redesign something like that using modern methods.

"I made some calculations, then I made the first attempt, using a Lowther basket of course, because they were easy to find. But when I first listened to it I was disappointed because it did not really have bass. Then when I took measurements it did not really have highs over 12kHz. And it was shouting and screaming in the mid. So I thought: 'Hmm! Must do better.'

"Then I started to make my own diaphragms. I think it took about 20 years, as alongside my job it was only a hobby, working at the weekends and in the evenings. At the end of the 1990s, it was nearly ready and operating in my home. It was only on an open baffle, but it was working fine.

"Then in 2005, Dr Zetsche, who had been head of Chrysler in the USA, came back to Germany. The first thing he did was to throw out everybody who wanted to go. So he offered all the engineers in the company a huge amount of redundancy money – a

quarter of a million euros. I thought: 'Never twice in your life will somebody give you such a big amount of money', so I said: 'Yes, now I will found my own loudspeaker company!'

"So we parted amicably, and I was still getting money for the 14 patents I had with Mercedes. I took the money and went away to Berlin and founded my loudspeaker company, with all the hobby stuff I had done before. I started to work full-time on the drivers, and then things progressed very quickly."

The drive units that Ines developed might still look a bit like Lowthers, but in the end every part was different.

"I found that the Lowther cone was quite heavy, about 7.5 – 8g. A lower moving-mass is good for much better highs reproduction. So I created mine using a special Japanese calligraphic paper. It's actually 5.5g for the complete cone assembly.

"Then I changed the geometry to get rid of the 'shout' in the mid. After lots of tests, I had a geometry which makes no shout. Then I went to a German chemical company and said: 'I want a surround which doesn't rot'. It makes them for us, and they are perfect. The oldest we have is actually six years old and we've never had any deterioration.

"During this development work we also tried leather, but when I found out that our driver can do a huge stroke [excursion], I wanted a suspension which held everything perfectly, and leather cannot do this. It acts as a seal, but it's not elastic. And leather makes a 'plop' noise at the end of a stroke. Although the leather surrounds work fine, the stroke is limited to 4mm, whereas the foam ones can do 12mm.

Voxativ's cones are bigger than they look from the front, because the surround is attached at some distance in from the edge.

"The cone has more area on the back than the front. Because we have a back-loaded horn, you need more cone area on the back. So I made the cone bigger, and it's also better at avoiding deformation.

Also, the central 'whizzer' treble cone has a curved profile at its edge.

"To create our special geometry and improve stability we press it with steam in a mould. Then we use a two-component coating, developed alongside a professor of chemistry at the University of Chemnitz. That adds more stiffness and avoids any problems with humidity.

As for the field-coil motor itself, the Voxativ *AC-X* is a very different beast from the old Voigt design.

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