

## **“Don’t believe what you see!”**

. . . . . hearing is believing . . . . .

At Wavecor we claim, just like any other speaker unit manufacturer would do, that our drivers have no or very little sound of their own. In other words that the electrical signal you feed into them is converted perfectly into an equivalent acoustical signal.

Of course, we all know that no speaker is perfect and that any speaker will change the input signal in some way before delivering it to the air as audible sound.

In this respect speakers are not different from other kinds of audio equipment like amplifiers, CD players, cables, etc. Every piece of equipment will change the sound signal in some way – more or less, depending on how well the equipment was designed and made.

However, some speakers come closer to perfection than others and some even come really close. Wonder what makes the differences?

One argument we deal with in the speaker business is how to define and measure how good a speaker unit sounds. How do we judge if a speaker unit is good or less good?

Most manufacturers of speaker units use a purely “scientific approach” when developing their products. In other words, they let their measuring equipment tell them whether a speaker unit is good or bad.

In today’s speaker driver industry, by far the most common way of telling how good a speaker unit is, would be to measure the SPL frequency response (magnitude). The closer the frequency response comes to a straight horizontal line, the better the speaker unit is considered to be.

Besides measuring the SPL response, driver manufacturers may make impedance measurements and measure the harmonic distortion, and possibly perform a few other measurements.

If all measurement results are good, the unit is deemed “good” and released for sales and production.

It turns out that the most common measurements made on speakers are in the frequency domain – maybe because that’s the easiest measurements to make and interpret.

At Wavecor we believe it’s a mistake to pay overly much attention to the frequency domain performance as our ears and our experience tell us that the time domain probably is the most important for how natural a speaker is perceived to sound.

It is a fact that most of the even highly recognized names in the international speaker unit industry develop their products as described above. Based purely on measurements and none or very little efforts spent on trying to listen to their products and trying to optimize how they sound - using the human ear as the measuring instrument.

This is unfortunate because in reality, even with today’s sophisticated measuring equipment, there still remains rather poor correlation between the measured data and how the sound is perceived by the human ear. In other words: The measurements we have available are unable to tell everything about how a speaker sounds.

It does not mean that measurements are not important. They are very important! A speaker with a very uneven frequency response will never sound good. A speaker with very high harmonic distortion will never sound good either.

However, a speaker with flat frequency response and low distortion may or may not sound good. It will depend on other parameters as well, some of which we are not yet able to measure, except if using the human ear. Again, we have to look into the time domain for differences causing the speaker to sound as it does.

Wavecor is one of the very few speaker unit manufacturers in the world that gives the highest priority to how our drivers sound. We do make all the known scientific measurements and pay great attention to the results. We optimize each and every parameter. However, at the end, our ears will make the final decisions. If we have to choose between two design directions, where one for instance linearizes the frequency response, and the other improves the sound judged by our ears, we will always pick the choice that makes the better sound.

Here we are. With Wavecor as one of very few manufacturers of speaker units that actually spends a lot of time listening to our drivers and optimizing the sound.

The results we obtain are significant. Compared to drivers developed in the “normal, purely scientific” way, Wavecor drivers offer a higher level in natural sounding. And natural sounding is really what it is all about.

Wavecor advantages are mainly audible in the time domain rather than frequency domain.

Try to listen for yourself – you will understand what we mean!

Wavecor drivers are built for High Resolution Playback, which means that Fine Details and Textures are reproduced without loss and that Dynamics are preserved without compression.

The resulting characteristics are precise presentation of Space and Acoustics Of Recording Venue, unheard Transparency, and sharp and precise Focus.

You will not discover all of the main qualities of Wavecor drivers by measuring only but you most certainly will when you start listening.