

Through the ears of balance engineers

Perfect use of Pearl ELM-C microphones for recording strings in an orchestra

A review by Jean-Marie Geijssen, the Grammy Award winning sound engineer of Polyhymnia International B.V.

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“Recently I had the possibility to test 2 Pearl ELM-C microphones during a recording project in the Tonhalle in Zurich with the Tonhalle Orchestra Zurich under the baton of maestro Paavo Jarvi. These microphones were provided by *microSound*, the distributor of Pearl microphones in the Netherlands.



The reason I was interested in this particular model was the rather odd shaped microphones capsule. At first glance one is expecting this to be a figure of 8 but after closer inspection it turns out this ELM-C has a cardioid pick-up pattern, exactly what I need. Due to the long rectangular shaped capsule, it's almost 8 cm high, the sensitivity in the vertical plane is flattened resulting in a oval shaped pick-up.

The projects I do in Zurich require lots of control of the individual orchestral groups and instruments. Especially the strings need a lot of control and therefore isolation, it seems they can never be too loud in the mix. To achieve this isolation I use directional microphones and that's exactly where the problem starts. As a well-known Philips Classics balance engineer Onno Scholtze used to say: “you have microphones, which are omnidirectional microphones, and you have equalizers being the directional microphones”. And in a sense he was right. Every directional microphone has a sound of its own, much more than an omnidirectional has. Meaning you have to know your microphones to choose the best matching sound for the source you are recording. And in my case, in Zurich, standard I am using Schoeps mk4 or mk41 capsule as supports on the upper strings, lower strings often Neumann TLM170. On the winds I use DPA 4011 and Neumann km140 on brass and percussion. Being surrounded by the best of the best microphone manufacturers, this Pearl ELM-C had to prove itself.



As in the case of the Tonhalle in Zurich, I use 2 string microphones per string group, for capturing a bigger selection of the individual string groups and the ability to add the support groups as a stereo feed to the mix. In this case I was planning to use the Pearl ELM-C as the second group microphone, located a bit more into the group replacing the standard Schoeps mk4. Realizing this was a risk. Changing a proven concept and replacing one of the 2 most important support microphones on the first and second violins was not without risk. So I decided not to inform the producer involved beforehand I was doing some experiments.

On Monday morning at 10:00 we had our first session. As usual in a rehearsal, it takes the orchestra 15-20 minutes to find their sound again, and then it was time to do some quick solo listening on the new microphones, real solo and in the solo group with the other string microphones. And to my delight, these Pearl-ELM-C fitted really well. They sounded exactly what I was hoping for. A nice saturated full body string sound, never harsh, never aggressive and never distorted. That was a very good start but the real test, the reason I was using these Pearl-ELM-C after all, was still to come. And then towards the end of the rehearsal, we finally reached the climax of the piece, the big tutti finale of the Bruckner Symphony. Here the brass and timpani were almost overwhelming loud on the main-system, sometimes having trouble

hearing the strings. Knowing I might need a bit more higher strings in the final mix, I started to listen on the group solos again. And to my delight, I could clearly hear the strings with articulation and detail, with plenty of isolation and not at all being blown away by the brass. That was a big relieve for me. This was the ultimate test for this Pearl-ELM-C. It was



the right microphone on the right place doing an excellent job.

After finishing the recording and being back home again, I did some more listening tests in my reference studio, the only place where I can really judge sound. Listening to the life mix of the last concert, this proved the fact I made the right decision using these excellent Pearl-ELM-C on my string section for this recording. Goosebumps as the strings adding more and more excitement to the finale reaching a higher and higher climax without ever losing them.”

Jean-Marie Geijsen, Polyhymnia International BV, The Netherlands

Jean-Marie is one of the balance engineers at Polyhymnia International . He has worked with many top classical artists, including Alfred Brendel, Ricardo Muti, J.E.Gardiner, Valeri Gergiev, Seiji Ozawa, Fabio Luisi, and Ivan Fischer. He has also recorded two albums for Andrea Bocelli, “Opera arias” and “Sacred Arias”. Jean-Marie studied audio recording at the Royal Conservatory in The Hague between 1984 and 1988, specializing in classical music with a special interest in baroque music.

From 1988 to 1990 he worked as a mastering engineer. In addition he freelanced as a classical recording and PA engineer. In 1990 he started working freelance for Philips Classics in Baarn as an editor and as a recording, remastering, and audio engineer. In 1996 was appointed to a full-time position as balance engineer for Philips Classics. Jean-Marie is very much involved with analogue electronics, and the audibility of electronics and cables.

