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Stoll Directive Sub Array at the Nunningen Open Air

August 2009 - Stoll Audio was able to use their longtime experience in the field of directive technology of loudspeakers for the design and realisation of yet another bass array. For the open air event in Nunningen (June 26th/27th, 2009) which was filled with sound by the BSH Audio company (Himmelried/SO), a controlled bass soundfield was requested with the subwoofers being placed under the stage. For this purpose 24 18“ subwoofers of the Shiva brand, driven by Lab.gruppen power amplifiers, were used in a Directive Sub Array.

24 subwoofers were set up as the Directive Sub Array at the Nunningen Open Air

Each Directive Sub Array unit consists of six 18“ subwoofers. Four of its 18“ woofer chassis are aligned forward. The other two 18“ chassis are turned backward, radiating into the opposite direction. This array type is scalable and features a uniform radiation characteristic even towards the upper frequency range. The scalability allows an extension of the array in steps of six subwoofers a time, whereby as a special feature the directivity pattern may remain constant. Usually the Directive Sub Array is driven by two to four channels, depending on the desired broadness of the radiation angle, the required sound pressure level and the width of the array.

A central Directive Sub Array, fed by a mono sum signal through four channels like at the Nunningen Open Air, produces a homogeneous and ideal sound dispersion by eliminating the interferences of common stereo subwoofers. In addition, the stage will remain free from excessive bass pressure with less emissions into the surroundings. Andreas Herzog of BSH Audio: “Besides the more uniform sound dispersion in the FOH, a reduction of the rear-directed bass volume by about 15 dB could be achieved. There were also hardly any complaints from local residents, something that was perceived in a very positive manner by the organiser.“