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The engineering method of sound field control for amplifications in sports arena

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This paper discusses the engineering method of sound field control for amplifications in sports arena, which includes the selection, assembly and adjustment of the loudspeaker system. It also includes the site characteristics of the sports arena, as well as the relations between the loudspeaker and the site. Through the measurements of the rated sensitivity and maximum noise power, the loudspeaker system can be determined as distributed or central system, linear or plane array. With the adjustments on parameters such as the directivity $D(\Theta)$ and the directivity factor Q , the loudspeaker system will be able to effectively control the sound field during amplification process and to achieve better sound quality in sports arena.

Besides determining the effective engineering method for sound field control in the amplification process, this paper also considers the acoustical characteristics of sound sources and coupling effect in the sound field.