



Design, installation and tuning issues for audio systems in large outdoor areas with artistic and archaeological constraints

Guido Diamanti

Professional audio consultant, guido.diamanti@audio61.eu

ABSTRACT

The design, the installation and the tuning of an audio system in a large outdoor space of great archaeological or artistic importance, are significantly constrained by the architecture of the site itself. Compared to a system installed in a conventional location, aspects such as the cables path, the dimensions and the positions of the speakers must be subject to limitations that require special attention from the contractor, in defining the layout of the system and above all in its tuning. The system installed in St. Peter's Square, even if it is not a very recent work, can be considered a bit like a showcase of all possible problems. Also, the temporal alignment of the speaker clusters will be discussed, with focus on the reduction of the effect of echoes ("macro delay" - time domain) and comb filters ("microdelay" - frequency domain).

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