

Technical Guide – Designing a Sound System

We are happy to help design an audio system for you, but whether you prefer to tackle this yourself or enlist our help, there are a number of important factors that need to be considered to ensure the effectiveness of the resulting system.

No matter how simple the job appears to be, the more information you can gather about the location and function of the proposed system, the better.

Please determine whether the system is for public address use only. If it is for Voice Evacuation where emergency message broadcasting is the primary function, please contact us first.

What Will the System Be Used For?

- Volume: Low level background music, paging and announcements or performance
- Quality: Full range music, speech only or performance
- Coverage: Perfect coverage requires more speakers. Can this be compromised?

Is the System to Be Zoned?

- Simple zones: The sound system may enable various areas of a building to have different volume levels with some control over the choice of input source to those areas.
- Complex zones: Different audio sources can be played in different areas, and there may be localised controls for the user to change the input and/or volume level in each area.

What Inputs are Required?

- Microphones: wireless or wired (hand held or paging)
- Background music: CD/MP3, USB/ SD, FM/DAB tuner, audio streaming
- Pre-recorded Messages: Automated announcements - triggered or timed

Description of the Location

- Dimensions of the area / areas to be covered including ceiling height (Plan and elevation scale drawings would be really useful)
- Acoustic properties: is the space reverberant or dull/dead?
- Ceiling type: solid or suspended
- Ambient noise: Background noise levels will effect the SPL and efficiency requirements
- Architectural constraints / permanent fixtures: Loudspeaker positioning and appearance may be compromised. eg, racking within a warehouse or pillars within a church.