

Integrated public address into emergency EVAC systems for commercial, institutional and industrial facilities.

Whether recorded or broadcast live, emergency messages delivered via a public address system can be used to convey much more accurate information regarding the nature of the situation as well as the seriousness of the danger. Just as important, urgent public address announcements can provide information with regard to the precise location within the facility of the hazardous situation, while also providing detailed follow up instructions for mass evacuation that go well beyond the limitations of sirens and other types of warning devices.

Among the many examples of how the integration of public address and primary building warning/alarm systems prove beneficial is the linking of video surveillance devices with public address capabilities. Viewing the emergency situation in real time will enable the security personnel of a sports stadium or shopping mall, for instance, to broadcast more accurate and more detailed instructions for safer and more effective mass evacuations.



Whenever public address systems are linked with warning systems such as fire alarms, for example, it is important to consider the unique requirements of emergency alerting and evacuation. Successful integration can only be achieved after first acknowledging that the critical demands of warning and evacuation far outweigh the "every day" requirements of a typical public address system.

When integrating public address with other emergency evacuation systems of commercial, institutional and industrial facilities, one of the biggest concerns centers on the selection and efficient positioning of speaker arrays. This can prove instrumental in enabling a mass notification system to broadcast clearly audible messages, warnings and evacuation instructions to the general public, students, employees, visitors and others.



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Clear, easy-to-understand messaging is highly dependent on the clarity of the sound, which subsequently depends heavily on amplifier performance and quality. Likewise, correct positioning of speakers will have an obvious impact on sound clarity, especially for larger facilities such as shopping malls and sports stadiums. While smaller, more cramped spaces may be able to get by with conventional ceiling speakers, larger areas with much higher ceilings such as manufacturing plants and concert halls may require special speaker arrays that not only direct sound downward but also deal with echoing that results from excess reverberation.

Over the years global positioning systems (GPS) have been incorporated into the fields of surveying and construction. This technology has subsequently been taken up by the professionals specifically responsible for planning, developing, integrating and installing mass warning and notification systems for industrial facilities such as chemical plants and petroleum refineries, as well as indoor and outdoor sports stadiums, shopping malls, hospitals and large educational institutions. Typically incorporated as overlays with site drawings, planners now use these images to calculate theoretical sound coverage for audible warning/alerting/notification devices including both sirens and public address systems.

From speaker sensitivity and properly sized cabling, to the availability of an adequate power source to amplify voltage input, there are a myriad of factors to consider in designing a public address system that is efficiently integrated with a facility's emergency warning requirements. And in many cases, effectively evaluating public address requirements as they relate to emergency warning and evacuation will call for the know-how of trained experts both in system integration and acoustics.

In the past, emergency warning systems and public address capabilities have often been considered as separate entities. That is clearly no longer the case, as evidenced by the latest generation of devices such as Federal Signal's DSA Siren that incorporates the necessary speaker arrays to accommodate emergency public address capabilities.



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