

APPLICATION PAPER

Physical Security



Physical security is often correlated to means and methods to survey and control physical threats related to specific assets. This can include a varied mix of products, each with a specific function in a designed system. For the threats that are direct, video surveillance, vibration sensors, hardened networking, communications as well as many other independent systems can be coalesced to form a complete solution.

Forming an integral of this mix is acoustic reinforcement. Specific audio content can serve as a powerful and effective tool to deterrent strategies. Voice messaging, sirens and other like content can often assist in performing a key role in protecting assets or controlling the threats. The problem with all is they can be breached in very short time frames rendering them useless. Two-way communications at a key access point can also assist with helping the security teams do their jobs.

In other critical environments like prisons, messaging to inmates serves as an essential role in the maintenance of control and good order. Messaging to large areas with the smallest amount of infrastructure reduces risk if the infrastructure being compromised. What is most at risk when considering these important subsets of a complete physical security system is the fact that any essential audio system can be compromised if you know where it is located.

Revolution Acoustics offers a wide array of feature benefits only available through the technology offered by its SSP6 Multiducer audio transducers which are changing how sound reinforcement interacts with listeners. Some high level benefits are as follows:

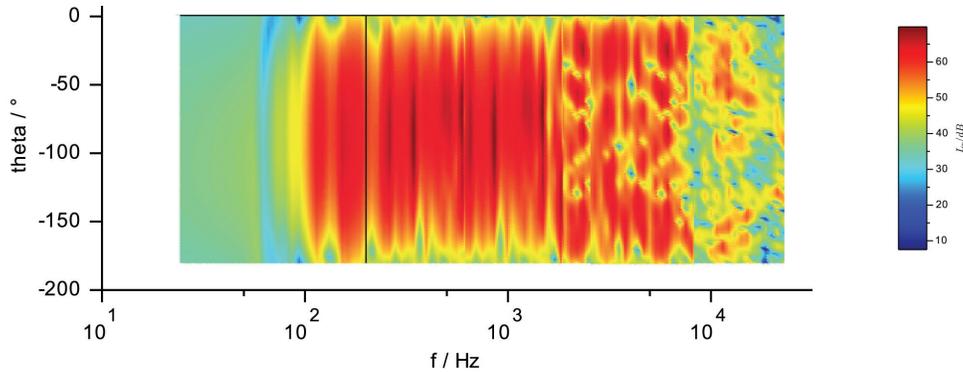
- Invisible
- Supports numerous security applications
- 2 minute installation
- Inability to breach as the transducer is hidden physically and can not be located acoustically while providing room filling audio
- Virtually solid state construction for near indefinite life cycle

Metal speaker covers show exactly where the equipment is installed and as a result, efforts can be applied to compromise them. Further, conventional cone type speakers roll off logarithmically offering little coverage at distance. More speakers means more equipment that can be breached. In close proximity the speakers usually offer too much sound pressure (SPL). The combination of these performance characteristics creates more compromises than solutions.

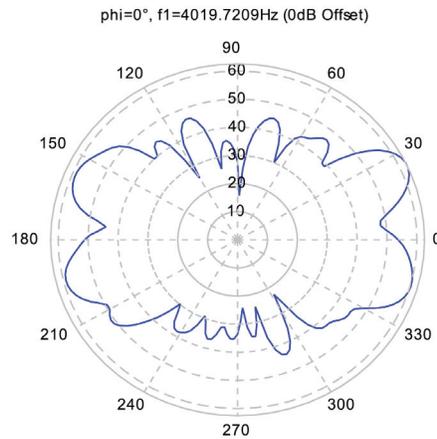
Revolution Acoustics SSP6 multifunctional invisible transducer offers a solution for these and several other problems. Installing invisibly in just a 2 minutes behind walls, in ceilings, in furniture, behind glass as well as other critical installations, the placement points options are numerous and can respond to specific needs unlike any other product. A key asset of the SSP6 is its robustness, simplicity of use, and ability to cause an entire wall to become a massive planar acoustic radiator which structurally changes the rules of engagement making them far better suited for security applications.

Creating large planar acoustic radiators does not reveal the speakers location physically as the wall shows no signs of the speaker, but also can not be located acoustically as the SSP6 will cause the whole wall to become a full frequency speaker. Audio content is propagated orders of magnitude deeper into a space as compared to a cone type speaker due to bending wave physics being used. Bending wave physics also allows the correct level of SPL is propagated evenly into the space with near perfect fidelity everywhere. Energising large surfaces allows 2 SSP6 Multiducers™ to more effectively replace 6 or more conventional speakers rendering a significant value proposition. Virtual solid stated construction will permit the transducer to last nearly indefinitely. The capacity to generate accurate speech with extremely high Speech Transmission Index scores is a significant asset as voice pages serve the main audio content being used.

Speaker 1: $\phi=0^\circ$, $r=2m$,



Acoustic contour plot (SPL - f/Hz - angle)



Polar plot (SPL - angle)

The SSP6 Multiducers are UL 2043 certified for fire and smoke in air exchange plenums, and are also IP65 Ingress certified for harsh environments. They can be used with 70 Volt systems and have transformers that can be supplied for this purpose for larger installations.

Regardless of the size of the installation, the SSP6 Multiducer is reinventing audio for security applications. Difficult problem sets are being given simple powerful solutions. Ask our experts for their advice on your next project.



SALES : + 1(514) 989-2212
sales@revolutionacoustics.com
www.revolutionacoustics.com

©2014 Revolution Acoustics LTD. All rights reserved.
Patented and numerous patents pending.
Product specifications subject to change without notice.
Revolution Acoustics®, SSP6™, CR2™, CR4™, RA2™, Multiducer™
Ergonomic Audio™ as well as all graphical trademarks herein
are property of Revolution Acoustics Limited. Rev: 141031