

Beyond Traditional Speakers: Ultrasonic Directional Sound Revolutionizes Museum & Kiosk Audio Solutions

LOS ANGELES, CA, UNITED STATES, June 20, 2025 /EINPresswire.com/ -- In retail stores, galleries, and public venues around the world, a new way of thinking about sound is quietly taking shape—literally. Ultrasonic directional sound, once largely confined to experimental labs and niche applications, is beginning to gain traction in commercial settings, offering a focused, controllable alternative to conventional loudspeakers.

At CES 2025, directional audio technologies made notable appearances across several exhibition halls. Among them, Chinese audio-tech company Audfly technology showcased its latest innovations, including a



collaboration with Lenovo to integrate its Focusound[®] screen directional audio technology into the latest generation of Lenovo's all-in-one PCs and laptops. These systems allow sound to be emitted directly from the display screen, providing a more localized and immersive audio experience—particularly relevant for privacy-sensitive or shared work environments.

A Shift in How Sound Is Delivered

Unlike traditional speakers, which emit sound waves in all directions, ultrasonic directional speakers use high-frequency ultrasound to create a narrow audio beam. This focused projection significantly reduces sound spillover outside the target area, making it possible to direct messages or soundtracks to specific locations without disturbing surrounding zones.

"It's not about total silence outside the beam, but about managing audio distribution more precisely," notes one exhibit designer who has tested directional audio in both museum and retail installations. "Visitors in front of an exhibit might hear a rich narration, while just a few feet away, the space remains quiet."

This capability is expanding the adoption of <u>directional audio solutions</u> in sectors such as retail environments, digital signage, and exhibition displays. In airports and shopping centers, directional sound serves as an effective <u>kiosk audio solution</u>, delivering targeted advertisements or announcements only to those standing directly in front of a kiosk or digital display—helping reduce sound spillover into surrounding areas. In museums and galleries, ultrasonic



Audfly's ultrasonic directional sound technology integrated with self-service digital kiosks, providing clear, focused audio to users without disturbing the surrounding environment.

directional sound is emerging as a <u>museum audio solution</u>, enabling immersive, multilingual storytelling without cluttering spaces with multiple headphone sets or disruptive background noise.

Real-World Use Cases Expanding

While precise data on adoption remains limited, anecdotal feedback from early adopters points to longer engagement times, higher visitor satisfaction, and better content recall in spaces using directional sound systems.

Experts in the acoustics field suggest that this technology may complement, rather than replace, traditional speaker systems. "In many scenarios, directional sound isn't meant to be louder or better—it's meant to be smarter," says Mao, an acoustics expert at Audfly Technology. "It fills a gap where ambient control, privacy, or focus are critical."

Indeed, the core value proposition lies not just in novelty, but in how directional sound reshapes the audio experience. Traditional commercial audio systems, particularly in open or shared environments, often create unwanted sound spillover or audio clutter. Directional systems offer a potential remedy by isolating sound delivery to where it's actually needed.

Opportunities and Considerations

Directional audio is not without its limitations. Installation often requires more precise calibration, and its acoustic performance may vary based on environmental factors such as surfaces, ambient noise, and user positioning.

Nevertheless, for commercial spaces where attention is fragmented and discretion is

valued—retail displays, exhibition booths, information kiosks—the appeal of focused audio is growing.

As CES 2025 attendee Klein observed after experiencing the Lenovo all-in-one PC integrated with screen-based directional sound: "It's like the sound is speaking just to you, but without the need for headphones. That changes how I'd think about open-office work or even customer service counters."

With more commercial venues competing for attention while trying to respect increasingly strict noise regulations, the growth of ultrasonic directional audio could signal not just a new way to deliver information—but a new way to think about sound.

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