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## The marketers have your ear

Beam of sound aims its messages

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GLOBE STAFF

Advertisers have a new way to get into your head.

Marketers around the world are using innovative audio technology that sends sound in a narrow beam, just like light, making it possible to direct messages right into consumers' ears while they shop or sit in waiting rooms.

The audio spotlight device, created by Watertown firm Holosonic Research Labs Inc., has been used to hawk everything from cereals in super-

market aisles to glasses at doctor's offices. The messages are often quick and targeted — and a little creepy to the uninitiated.

Court TV recently installed the audio spotlight in ceilings of bookstores to promote the network's new murder-mystery show. A voice, whispering, "Hey, you, can you hear me? Do you ever think about murder?" was beamed toward customers as they browsed the mystery section in several independent bookstores in New York.

For advertisers, the audio spotlight is a way of marketing to consumers, sending tailored

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messages without disturbing an entire store with loudspeaker announcements such as Kmart's iconic "Blue Light Special." The flat disk speakers with precision targeting have made sound possible in unlikely places — from Boston's Museum of Fine Arts to the New York Public Library — and are increasingly attractive to merchants trying to improve the shopping experience with a peaceful environment.

Major US companies, including Procter & Gamble Co. and Best Buy Co., are testing the device, but it is already being embraced abroad. Some marketers say it is only a matter of time before the technology takes off here.

### THE AUDIO SPOTLIGHT

Watch a video of the audio spotlight in action at [boston.com/business](http://boston.com/business).

"Advertisers look to capture people — especially when they are in the buying mood," said Tim Bilgor, chief executive of Innovative Media Solutions in London, which has installed the audio spotlight in Istanbul and Madrid airports, in shopping malls in China, and in the showrooms of Fiat car dealerships, where messages about product features are beamed to consumers as they approach the cars.

"There's so many vision technologies it can be overwhelming," Bilgor said. "The audio spotlight can captivate people in new ways."

Unlike traditional speakers, which broadcast sound in every direction, sound from an audio spotlight speaker can be focused directly at one spot, so no one else can hear it, or projected against a surface so that sound appears to come from the surface itself.

For example, a box of Fruity Pebbles can advertise its nutritional content, heard by shoppers only as they walk by boxes in the cereal aisle. The audio spotlight uses ultrasound to stimulate the air into making sound, which is emitted in focused, laser-like beams.

Joseph Pompei, the 33-year-

old chief executive of Holosonics,

### How it works

1 Sound is transformed into a thin, inaudible beam that travels without spreading.

2 The beam is distorted in the air in a predictable way.

3 The distortion becomes audible.

SOURCE: Holosonic Research Labs

old chief executive of Holosonics, began his career in acoustics while working as an engineer at Bose Corp. in Framingham. But as the audio industry became fixated on spreading sound everywhere, Pompei wanted to focus on finding ways to direct sound. He left Bose and developed a prototype of the audio spotlight and started the company in 2000 when he was a doctoral student at the Massachusetts Institute of Technology.

Pompei knows that for some people there is a certain creepy aspect to his technology — and he even delights in making mischief with it. At MIT's Media Lab, Pompei said, he used to stand on a balcony at the top of a five-story atrium and beam sounds of smashing glass to the ground floors as caterers were working at events to make them think they dropped dishes.

For his first demonstration in the campus theater, Pompei used the speaker to play a John Coltrane album and made it seem as if Coltrane's saxophone were flying over the audience and whooshing by their faces. He saved \$2,000 as a graduate student and began building the business after he graduated in 2002. A year later, MIT's magazine, Technology Review, awarded Pompei the Top Young Inventor Award.

"It's a device that preserves the quiet," Pompei said. "There's so

much going on, it's sometimes an audio assault. This is like surround silence."

Baba Shetty, director of interactive media at Hill Holliday in Boston, said it is very easy for people to filter out visual messages and advertisements — you look away or don't pay attention — but audio is less avoidable. It could be a great way to communicate with customers as they shop, he added, but it could also make consumers feel as if their personal space is being invaded.

"It doesn't do your brand any good if you annoy people," Shetty said.

At T-Mobile dealers in the United Kingdom, the audio spotlight allows consumers to test ring tones without the entire store knowing that they want to download Abba's "Dancing Queen." The Boston marketing firm Digitas hung an audio spotlight over a couch in the lobby so visitors can hear the company's advertisements playing on an LCD screen. But it's pure quiet for the receptionist sitting just a few feet away.

The MFA installed four audio spotlight disks as part of the recent exhibit, "Fashion Show: Paris Collections 2006." Each designer's collection had its soundtrack playing in its own zone, but the technology ensured music from the Chanel collection did not cross over to Dior's.

Directional speakers

Surface target

Sound can be projected against a surface so it appears to come from the surface or object.

Direct target

Beam can be directed to a specific spot, so the message is heard by only one person in a public area.

JAVIER ZARRACINA/GLOBE STAFF

Hadi Al Bahra, chief executive of TechnoMedia Ltd., said his firm has placed the audio spotlight in supermarkets for Carrefour SA, the world's second largest retailer after Wal-Mart Stores Inc. TechnoMedia is also pairing the technology with LCD screens, selling 15 second spots in different aisles for juices, coffee, milk, shampoos, among other products.

"For the first time, you can deliver different audio messages in different aisles at the same time and yet keep the environment noise free, which opened up the possibilities of new ways of marketing and selling air time," Al Bahra said.

Holosonics is also looking to reach consumers at home. The audio spotlight, Pompei says, has the potential to limit long-running feuds over television volume and musical taste.

Paul Hummel of Saddle River, N.J., bought the device last summer for his bedroom so he could sleep peacefully while his wife watched television.

"We have a fairly good audio/video system. Once you've done that and can spread sound everywhere, then you want sound selectively," Hummel said. "Now we can crank up the big TV without disturbing our neighbors or the rest of the family."

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