

Headphones that deliver 3-D sound

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In the virtual reality video game "Secret Shop," players hear a door creak open behind them, prompting them to turn around and set the game's plot into motion.

It seems like a simple thing. But creating accurate spatial [sound](#) - how people hear in real life - isn't technically easy. It is vital, however, in the emerging [virtual reality](#) gaming marketplace to fully engage players in the action.

San Diego startup Ossic has developed new headphone technology that it claims delivers incredibly accurate 3-D sound to users. The technology blends advanced 3-D audio algorithms, anatomy sensors and head tracking technology in concert to deliver richer, more realistic audio.

"Headphones haven't really changed a lot since the late 1950s when stereo headphones came out," said Ossic co-founder and Chief Executive Jason Riggs. "They sound like a very close sound field next to your head. That is not how we experience sound in reality."

Based at a startup incubator, Ossic thinks its technology can provide a better sound experience not only for virtual reality gamers but also for anyone watching video or listening to music using headphones.

What makes Ossic different? Everyone hears the world differently based on their anatomy, according to the company. Its headphones include sensors and algorithms that deliver sound based on the user's head size, ear shape and other physical characteristics.

"You put it on and it automatically calibrates," said Riggs. "That is what allows you to get the sounds out in front of you, or above you, or behind you. So I think we have something that is pretty unique."

Founded in 2014 by former Logitech audio engineers, Ossic launched a Kickstarter campaign late last month to raise a minimum of \$100,000 in orders for its first product - Ossic X headphones. Kickstarter prices range from \$219 to \$299. (When the headphones eventually go on sale online, the price is expected to be \$399.)

To date, the company has received \$1.1 million in orders, with 40 days to go in its campaign.

Ossic also was accepted recently into Abbey Road Red, a six-month music technology incubation program at the famous Abbey Road Studio in London. The program promises access to studio facilities, mentoring and exposure to entertainment technology investors.

The smart headphone market is predicted to reach \$7.48 billion in the next six years, says market consulting firm Grand View Research. It will be driven by advanced features such as higher fidelity and better noise cancellation, as well as the explosion of portable devices.

There are huge headphone competitors ranging from Bose to HTC to Samsung to Apple. In addition, virtual reality headset makers such as Oculus Rift include built in 3-D audio in their devices.

But Riggs believes Ossic's approach is different enough to find a niche.

"If we were just doing [headphones](#), I would say it was a crowded space," he said. "But we don't see anyone else taking on the challenge of individualization in a consumer product."

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