



Multi-functional headphones

## NEW DEVICE TURNS HEADPHONES INTO TINNITUS EARLY WARNING SYSTEM

 SPORT & FITNESS

### A prototype alerts users who may be at risk of developing hearing conditions like tinnitus.

Cambridge-based electronics consultancy **Plextek** has created a hearing device that can be used in normal consumer headphones to create an early warning system for tinnitus. The condition that is often described as ‘ringing in the ears’ affects 300 million people globally and, according to the World Health Organization, 50 percent of all hearing issues would be preventable with primary invention.

The device works by monitoring subtle changes to Auditory Evoked Potentials (AEP), a signal sent from the brain by an acoustical stimulus that measures an individual’s hearing ability levels. Users can sync the device with a smartphone app and be alerted if there is a potential problem, encouraging the wearer to seek medical help or take preventative action.

Existing technologies used to detect hearing conditions such as tinnitus are currently restricted for use within clinical environments, meaning patients only have their hearing monitored during intermittent health checks or when advanced symptoms are present. Plextek claims its solution is the first consumer headphone solution that can be used outside of a clinical setting.

The device is the latest of an influx of home health technologies entering the market, such as the recently developed [smart ring to track vitamin D](#) and a [wearable track-jaw movement](#) for monitoring mental health. A report by **Tractica** forecasts that 78.5 million consumers will utilize such technologies by 2020, representing a huge hike compared to 14.3 million worldwide users in 2014. Where does health technology outside of the clinic fit into healthcare systems around the globe?

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