

Patent talk: Apple concept features earbuds that can be worn interchangeably

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Credit: US Patent #: US010149041



Are we about to see Apple reaching an even newer gold standard in ear buds? Apple has a patent for AirPods with built in biometrics. It's being called "universal" because the idea calls for ear pods that can be worn in either ear. That would mean no more left-right business.

Much of the tech news coverage is focusing on the "interchangeable" aspect of the <u>patent</u> concept. *9to5Mac*'s Alex Allegro said interchangeable earbuds "equipped with 'at least one' biometric sensor, which could detect left/right ear placement and accordingly adjust audio." He assessed the potential advantages as "evolving AirPods from a separate left / right unit to a single component," which could lower costs and simplify getting a replacement AirPod.

If the <u>ear buds</u> are interchangeable, then it is a big deal in terms of user satisfaction. OK, the product is popular now but *The Verge* reminds us that the AirPod is not a perfect fit for everyone. Nick Statt: "Due to the <u>shape</u> of some people's inner ear, the headphones simply don't fit every possible ear shape well."

For sure, some AirPod observers think this is quite fundamental whether or not the product would attempt to do other feats in the health monitoring or entertainment realms. Victoria Song in *Gizmodo* made a case for good fit as a first and foremost deal-maker.

"Interchangeable AirPods, like the new patent suggests, would be nice...eliminating the five seconds to figure out which earbud goes in where would probably save me at least ten minutes throughout a year. More importantly, the overall shape of the new buds in the patent addresses one of the biggest problems folks have with AirPods: Fit. Because really, all I want from new AirPods is a guarantee they won't fall out of my ear."

"Right now the AirPods have been designed in such a way that even if



you wanted to wear the left earbud in your right ear, it would be difficult," said Tyler Lee in *Ubergizmo*.

Depending on the sensor readings, the earbuds would intelligently figure out whether they are used on the <u>left</u> of on the right," said *Pocketnow*.

According to *9to5Mac*: "Three images from the documentation demonstrate a foam ring expanding within the ear canal to achieve optimal fit and ideal sensor placement against skin."

The concept would affect the choice of materials used. Allegro said that "in the pursuit of a universal fit, Apple might deem expanding foam as the best option as opposed to hard plastic."

Statt said the AirPods could perform heart rate monitoring and take body temperature measurements, among other health-related metric tracking.

It is no surprise that Apple continues to give its AirPods TLC, as it has been shown to be a popular item under the Apple banner. A November headline said it all: "AirPods were the <u>best-selling</u> product at Best Buy last month, followed by Lightning to 3.5mm adapter."

The patent was filed in October last year and now dated as December 4, titled "Earbuds with compliant member."

The patent discussion described "earbuds configured with one or more biometric sensors." At least one of the biometric sensors is configured to be pressed up against a portion of the tragus [the inner side of the external ear] for making biometric measurements.

They wrote that the housing of the earbud can be symmetric, with the earbud worn interchangeably in either left or right ear. As such, the



earbud can have sensor and circuitry "configured to determine and alter operation of the earbud in accordance to which ear the earbud is determined to be sitting in."

According to *Patently Apple*, <u>Apple's</u> AirPods were the topic of a rumor earlier this year next-gen AirPods could possibly adopt biometrics as Apple's patents have outlined.

Whether or not we will see the likes of this patent discussion materialize sooner or later, we have a sense of what whets the research appetites of engineers at Apple and keeps Apple watchers all the more curious. "

Of course, Apple patents can never be relied upon to tell you what kind of hardware Apple actually has in development, and while this patent was published this week, it was filed over a year ago," said *Mobile ID World*. Nevertheless, it added, "with renowned analyst Ming-Chi Kuo predicting new AirPods for next year and a bigger redesign in 2020, it's quite possible that this patent offers a glimpse at the devices' <u>future</u>."

More information: US Patent #: US010149041

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