

Ear Melds embeds COTS sensors into custom-fit earpieces providing innovative capabilities and data insights, meeting critical mission needs such as real-time health monitoring, enhanced situational awareness, precision data collection, or superior sound attenuation. Designed to be fully adaptable and customizable, Ear Melds allows seamless integration into broader soldier health tracking and mission-critical systems. Integration of health monitoring or audio sensors into a customized, need-tailored device allows Ear Melds to revolutionize wearable technology, offering comprehensive, enhanced solutions for precise data collection and optimized soldier performance.

American-Made

Ear Melds are proudly designed and manufactured in Ohio. Engineered as a drop-in replacement for typically inadequate health sensors and existing audio equipment, Ear Melds are customizable and can be modified with a variety of sensors to deliver insights tailored to end-user mission-sets – providing flexibility alongside emerging mission needs.



Fully Customizable

Ear Melds are a fully customizable wearable. Like a smartwatch, but uniquely designed to reside comfortably in the ear, these sensory devices combine custom fit with adaptable sensor options to deliver unique data insights aligned to evolving mission needs. Contact us to build your custom sensor earpieces



Revolutionary Smart Sensor Platform

Ear Melds replaces traditional smart sensors and wearables by delivering more accurate head-level insights such as blood oxygen, heart rate, heart rate variability, respiration rate, 6DoF movement analytics with activity recognition, head-level core temperature, and more.



SPECIFICATIONS

Origin:

United States of America

Why an Ear Canal Wearable?

The ear canal is the ideal location for oximetry, temperature monitoring, and many other sensors –

 Custom fitting keeps the inertial sensing unit tightly coupled to the head, preventing slippage.

Benefits of Custom Fit:

Remains securely in place, better core temperature data, and reduced motion artifacts in PPG Signal.

Wireless Option:

Ear Melds have been integrated with near field magnetic inductance (NFMI) providing a LPI/LPD Wireless Technology option for secure data transmission and improved head mobility.

Additional Future Options:

- Intelligent Ambient Noise Filtering
- Remote Health Monitoring
- Audio Alerts/Warnings
- TBI Risk Awareness
- DSP & ML Computing Core



