

**EVITAVONNI  
CONSTRUCTION  
— GROUP —**

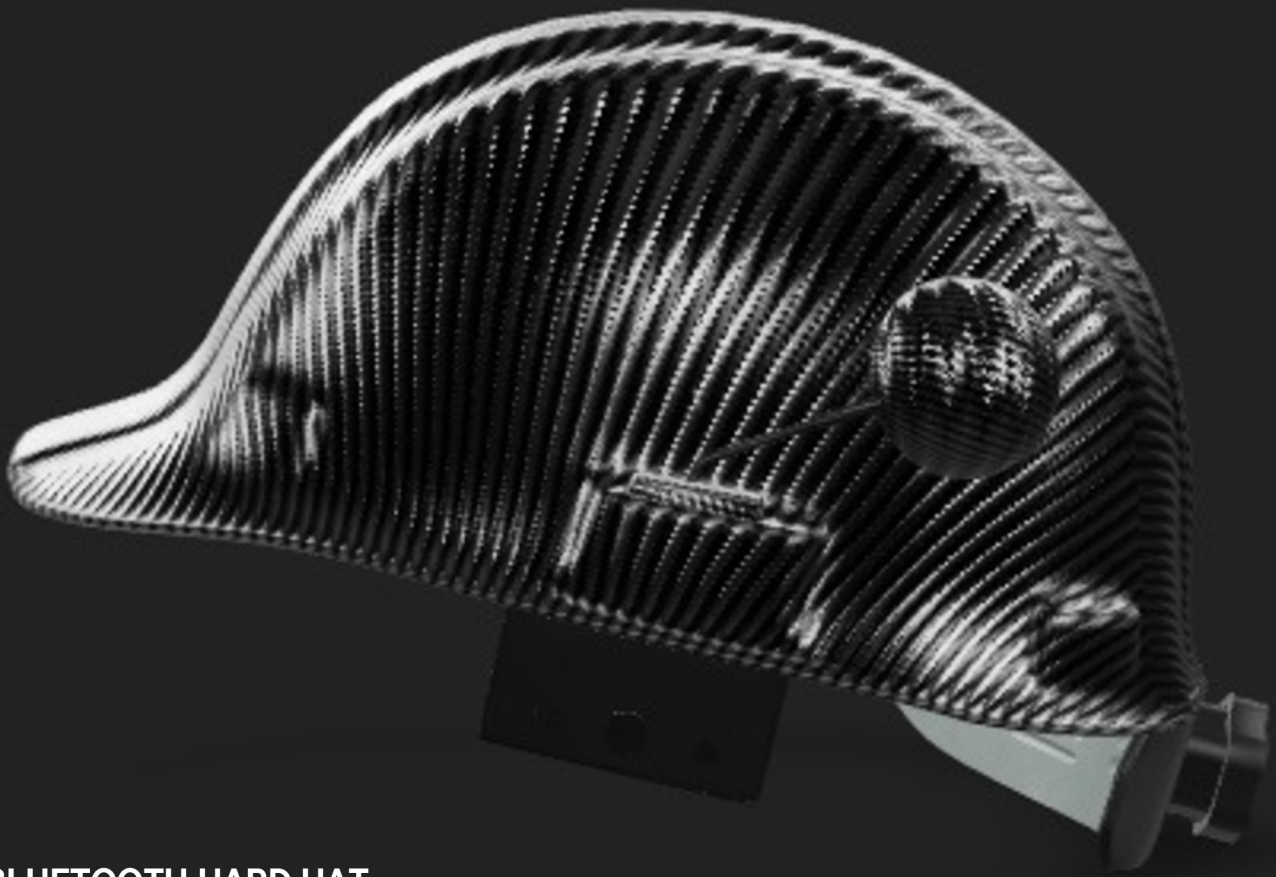
# **BLUETOOTH HARD HAT ADD-ON**

**USPTO PATENT #  
US12,009,852,B2**

# **2025**

PRESENTED BY:  
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## THE BLUETOOTH HARD HAT

### INTRODUCTION

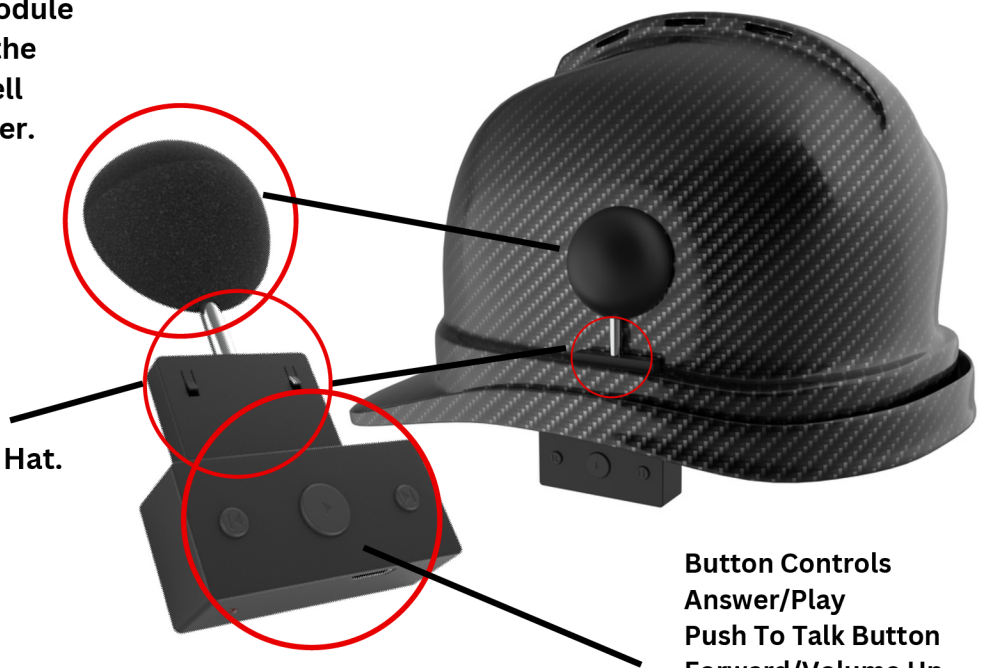


# Revolutionizing Worksites with Smart Tech Safety

The **Bluetooth Hard Hat Accessory** is a groundbreaking innovation in personal protective equipment, transforming any **standard hard hat into a hands-free communication hub**. Unlike traditional setups that rely on external radios or headsets, this retrofit system enhances job-site coordination while preserving **full situational awareness with an open-ear design**. Leveraging Bluetooth and Wi-Fi, it enables seamless connectivity, eliminating the need for expensive communication infrastructure. Engineered for **construction, mining, oil & gas, and industrial environments**, it boosts safety, productivity, and team efficiency with a scalable, cost-effective solution.

Vibrating Module  
converting the  
hard hat shell  
into a speaker.

Designed to fit  
into the pencil  
holder of a  
standard Hard Hat.



Button Controls  
Answer/Play  
Push To Talk Button  
Forward/Volume Up  
Backward/Volume Down

## THE TECHNOLOGY

# Why We're The Future...

### **Eliminates Traditional Audio Devices With Push To Talk Feature**

Our technology turns the hard hat itself into a speaker through harmonic resonance. This removes the need for additional equipment that can interfere with hearing protection, cause discomfort, and integrates seamlessly with **Push-to-Talk functionality** for effortless, instant communication across teams. By embedding communication directly into the hard hat structure, workers can stay connected without compromising safety or productivity.

### **Maintains Full Situational Awareness**

Traditional headphones and earmuffs block environmental sounds, creating safety risks by limiting a worker's ability to hear alarms, machinery, or nearby voices. Our system allows workers to receive clear, real-time communication **without covering their ears**, ensuring continuous awareness of job-site hazards while still staying connected.

## Cost-Efficient Alternative to Expensive Radio Infrastructure

Many industries rely on leaky feeder radio systems, repeaters, and wired communication networks that cost millions to install and maintain. Our system works with **Wi-Fi, cellular networks, or Bluetooth**, eliminating the **high infrastructure costs** associated with underground mining, large construction sites, and remote work environments.

## Future-Proof and Scalable

The fact that our system can work with multiple communication technologies (Bluetooth, radio, Wi-Fi, cellular) makes it adaptable for future advancements in smart job-site connectivity. It can be easily integrated with **workforce tracking, AI-driven safety monitoring**, and **IoT-based site management**, making it a **powerful tool for industrial digital transformation**.



## The Next Evolution of PPE: Push-to-Talk & Smart Safety

Our **Bluetooth Hard Hat Accessory** is more than just an upgrade—it's a game-changing innovation that seamlessly integrates safety and communication. By transforming any standard hard hat into a hands-free communication system, this solution enhances productivity, reduces operational costs, and improves job-site safety like never before. With built-in Push-to-Talk functionality, workers gain instant, real-time connectivity without the need for external devices, enabling faster coordination, streamlined workflows, and immediate response capabilities for a safer, more connected workforce.

**This patented technology** has the potential to disrupt multiple industries, including construction, mining, oil & gas, utilities, shipbuilding, and more. It fills a critical market gap by providing a smarter, safer, and more cost-effective communication solution that removes the need for additional headsets, expensive infrastructure, and outdated walkie-talkies.



# More Than a Hard Hat —A Game Changer.

Feature	Bluetooth Hard Hat	Traditional Walkie-Talkies	Bluetooth Earmuffs & Headsets	Industrial Communication Headsets
Hands-Free Communication	Yes	No	Partial	Partial
Situational Awareness	Yes (Open-Ear Design)	No	No	No
Audio Clarity & Signal Strength	Crystal-Clear Bluetooth Audio	Prone to Static & Interference	Limited	Moderate
Infrastructure Costs	Minimal (Uses Wi-Fi/Bluetooth)	Expensive Leaky Feeder Systems	No Network Required	High
Software & IoT Integration	Yes	No	No	No
Live Alerts & Data Logging	Yes	No	No	No
Future-Ready Technology	Yes (Upgradeable via Software)	No	No	No

## Where They Fail, We Deliver....

Competing products rely on outdated infrastructure and limited adaptability—our Bluetooth Hard Hat add-on is a self-contained, scalable solution that transforms workplace safety and efficiency.

By integrating seamless hands-free communication, real-time safety alerts, and IoT workforce analytics into a certified hard hat, we eliminate the barriers of traditional radio systems, expensive infrastructure, and inefficient communication tools.

As industries move toward smart technology and automation, our product ensures that companies are equipped for the future, reducing costs while increasing safety and productivity.

# Smart Tech Capability



## Smart Communication Meets Advanced Safety

The Bluetooth Hard Hat Accessory is more than just protection—it's a cutting-edge solution that redefines job-site connectivity. Unlike traditional PPE, it integrates an advanced software ecosystem, turning any standard hard hat into a real-time communication hub, workforce coordination tool, and safety monitoring system. With built-in Push-to-Talk functionality, it enables instant, hands-free communication, eliminating the need for outdated radios or cumbersome headsets. Workers can stay connected without disruption, enhancing efficiency, safety, and situational awareness.

Equipped with live alerts, voice reminders, GPS tracking, and cloud-based updates, the system continually evolves, incorporating future advancements such as biometric health monitoring, predictive hazard detection, and IoT-driven automation. No other solution offers this level of adaptability, making it the next-generation smart PPE for modern industries.

# Revolutionizing Safety Across Multiple Industries

The Bluetooth Hard Hat accessory is a game-changing innovation designed to enhance safety, communication, and efficiency across **multiple industries**, including **construction, oil & gas, electricians, mining, utilities, heavy manufacturing, shipbuilding, rail and transit infrastructure, and tunneling**, providing a cost-effective, future-ready solution that eliminates outdated communication barriers while improving real-time coordination on job sites.

## Market Demand & Growth Potential

- The global industrial **safety helmet market** is expected to reach **\$3.19 billion by 2030, driven** by increasing safety regulations and the demand for smart PPE solutions.
- The construction safety equipment market alone is worth **over \$10 billion**, showing massive potential for integrated smart hard hats in commercial and civil engineering projects.
- Smart PPE adoption is expected to grow by 20% annually, as industries move toward connected, AI-driven safety solutions.

**6.5 Million**

workers in North America are required to wear hard hats daily, representing a massive market for smart PPE solutions.

**2.7 Billion**

The global industrial safety helmet market is projected to grow from 2.7 billion to 3.19 billion by 2030

**20%**

Smart PPE is expected to grow by 20% annually, as industries move toward real-time communication, workforce tracking, and automation-driven safety solutions.

EVITAVONNI CONSTRUCTION GROUP

# “EVITAVONNI” STANDS FOR “INNOVATIVE” ...

(54) **HARD HAT COMMUNICATION SYSTEM** (52)

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(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 339 days.

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Related U.S. Application Data