# Lassen Peak Awarded Two Foundational Patents for Worldâ??s First Handheld Terahertz Concealed Weapon Detection System

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Apparatus and method-of-use patents establish full-stack intellectual property protection for the companyâ??s AirFriskâ?¢ handheld scanner

BELLEVUE, Wash., Feb. 5, 2026 /PRNewswire/ â?? Following a multi-year development effort, Lassen Peak, Inc. announced today the award of two U.S. patents for its AirFrisk handheld concealed weapon detection scanner, bringing its number of issued patents to a total of six, with more pending. Co-founders Hatch Graham and Dr. Ehsan Afshari, both named as inventors on the patents, secured comprehensive intellectual property protection covering both the physical device and its operational methodology â?? a double-lock on the technology that strengthens the companyâ??s position as it moves toward commercialization.

Patent No. 12,332,342, granted on June 17, 2025, protects the apparatus, including the handheld scanner and its proprietary single-chip radar architecture. Patent No. 12,405,367, granted September 2, 2025, protects the method of use, or the process of conducting non-invasive concealed weapon detection at a safe distance, without physical contact. Together, these patents protect the â??nounâ?• and the â??verbâ?• of the innovation and position Lassen Peak to continue its march toward commercializing technology designed to improve safety for both law enforcement officers and the communities they serve.

The AirFrisk scanner operates at 304-311 GHz â?? in the submillimeter-wave band where wavelengths drop below one millimeter. This threshold, starting at 300 GHz, marks the boundary between true terahertz radiation and enables the resolution needed to distinguish a concealed weapon from everyday objects such as phones, wallets, and keys. Lassen Peak was granted a 10-year FCC Spectrum Horizons experimental license in early 2023 for the 280-320 GHz range, providing federal authorization for continued development and field deployment.

The awarded patents protect pioneering technology for a handheld, battery-powered, concealed weapon detection system operating at true submillimeter-wave frequencies. Unlike fixed-installation systems designed for facility entrances â?? which require wall power and stationary deployment â?? Lassen Peakâ??s architecture enables field-portable operation. This positions the AirFrisk scanner as personal equipment, analogous to a body camera or a Conducted Energy Device (CED), rather than as infrastructure such as a metal detector arch.

At the core of the system is a proprietary Radar System on Chip (RSOC) featuring a complete phased array with 24 receivers and 8 transmitters on a single chip, programmable for 48-192 transmitter/receiver combinations. The coherent detection design â?? measuring both the amplitude and phase of returned signals â?? delivers significant signal-to-noise enhancement over conventional approaches, enabling battery-powered operation in a handheld form factor.

â??Securing both apparatus and method-of-use patents required a rigorous, multi-year prosecution strategy, but it was essential to our mission,â?• said Hatch Graham, Co-founder, Chairman, and CEO of Lassen Peak. â??Weâ??ve protected not just the hardware, but the fundamental process of handheld concealed weapon detection. This multi-patent structure creates a commercial moat that serves both our investors and the law enforcement agencies that will depend on this technology.â?•

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â??These patents protect the innovation that makes handheld operation possible: A coherent radar system operating above 300 GHz on a single chip,â?• said Dr. Ehsan Afshari, Co-founder, Chief Scientist, and Professor of Electrical Engineering and Computer Science at the University of Michigan. â??Achieving submillimeter-wave imaging in a battery-powered form factor required breakthroughs in antenna design, AI, semiconductor technology, and signal processing. This architecture delivers the resolution to identify concealed weapons while remaining safe for frequent use, operating at a fraction of the power of a standard cellphone.â?•

Beyond the technological achievement, Lassen Peak has built a leadership team that preemptively addresses the intersection of public safety and civil liberties. Scott Greenwood, a nationally renowned constitutional rights attorney and General Counsel Emeritus of the American Civil Liberties Union (ACLU), joined the companyâ??s Board of Directors after serving as one of the organizationâ??s lead legal officers for over a decade. As the immediate past chair of constitutional policing and best practices for the International Association of Chiefs of Police (IACP) Human and Civil Rights Committee, Greenwood ensures that AirFrisk technology is deployed within strict constitutional boundaries, mitigating liability for agencies, minimizing risk to law enforcement officers, and safeguarding the rights of members of the public.

About Lassen Peak

Lassen Peak is a Seattle-area startup comprising a unique blend of industry technology leaders in ultra-high-speed wireless, imaging radar, artificial intelligence, geo-positioning, and other technologies, public safety veterans in law enforcement, military, high fan-volume entertainment industries, and civil rights and social justice leaders. Matching advanced technologies with the need for a transformation in public safety solutions in the field, the team is committed to providing law enforcement and society with safe and less contentious alternatives to the legacy methods of identifying concealed dangerous objects and weapons.

Forward-Looking Statements

This press release contains forward-looking statements regarding the companyâ??s technology, product development, and commercial plans. Actual results may differ materially from those expressed or implied. The company undertakes no obligation to update forward-looking statements.

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