

Tactical Communications and Hearing Protection

The Best Way to Maintain Overmatch on the Battlefield Is to Ensure You Can Communicate

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As every Soldier knows, no plan survives first contact, but if you can't hear the new plan after first contact, then there is no surviving. In his book *Men Against Fire: The Problem of Battle Command*, S.L.A. Marshall speaks to this fact. He exhorts the importance of ensuring that men communicate on the battlefield when he states, "Information is the soul of morale in combat and the balancing force in successful tactics."¹ This statement, and many others in his work, drives home the point that Soldiers must communicate on the battlefield to ensure unit cohesion, assist the small unit leader in tactical decision making, and ultimately enable the Soldier's senior commander to apply the right type and mix of combat power that will ensure overmatch against our adversaries. These lessons were true of warfare in the 1940s when Marshall wrote this book, and they remain true today, especially as the U.S. Army begins to transition back to large-scale combat operations in a multi-domain environment. This article will provide some insight in how the Soldier Requirements Division (SRD) of the Army Futures Command is looking to enable ground communications (vocal communications) on the modern battlefield.

To enable the sharing of verbal information, the SRD has chosen to pursue writing a requirement that will result in a dual-purpose material solution. That solution will provide a communications interface with a Soldier's radio as well as active hearing protection to preserve the Soldier's ability to hear. The name of this solution is Tactical Communication and Hearing Protection (TAC-HP). Before we present SRD's plan to field this solution, one must understand the purpose of the Infantry as well as the Army's challenges in protecting Soldiers' hearing to recognize the need for investments in TAC-HP technologies.

The mission of the Infantry is to close with the enemy by means of fire and maneuver in order to destroy or capture him or to repel his assault with fire, close combat, and counterattack. The Infantry engages with the enemy with combined arms in all operational environments to bring



Photo by MAJ Jonathan Camire

An advisor from the 2nd Security Force Assistance Brigade heads out on a mission during the unit's 2019 deployment to Afghanistan.

about his defeat. In simple terms, the Infantry destroys the enemy and holds terrain. To accomplish missions, Infantry Soldiers must be able to hear commands from their leaders. Otherwise, there is no unity of effort on the battlefield, massing of fires, or simple cohesiveness down to the team level. This fact requires the Army to seek some solution that enables Soldiers to better communicate now to protect their hearing.

The Army has a huge challenge in preventing hearing loss. Here are a few reasons why we need to protect our Soldiers' hearing. First, continued, unprotected exposures to hazardous noise can produce a marked loss in one's ability to communicate — think machine-gun fire. In 2018, 21 percent of Soldiers had some degree of hearing loss, and five percent of Soldiers had clinically significant hearing loss.² Second, individuals with noise-induced hearing loss (NIHL) may be unaware of their hearing loss and not notice communication difficulties in quiet listening situations. Unprotected, high-intensity noise exposure can lead to a perceived ringing, buzzing, or hissing sound (tinnitus). Third, the Army's annual cost of hearing aids, batteries, and accessories for active-duty Soldiers is an estimated \$3-4 million for the last six years. The costs for all service members are approximately \$6-9 million for that same period (costs based on aggregated data provided by the Department of Defense Hearing Center of Excellence, derived from the Denver Logistics Center - Remote Order Entry System and the Military Health System Data Repository). These facts, along with a multitude of others not listed here, show why the Army must seek to better protect Soldiers' hearing.



Possible Tactical Communication and Hearing Protection Solutions

Both styles will provide the same functions and capabilities to the Soldier. The names speak mainly to how they are worn. In-the-ear systems are like ear plugs that have a wire running out to a central hub. Over-the-ear systems are more akin to ear muffs that surround the ear. Both styles are common in the industrial base, and each has several pros and cons. The Army has not chosen which style to pursue as of yet and will rely upon Soldier Touchpoints to help decide.

One might ask, where do we stand today with these initiatives — doesn't the Army already have ear plugs? Yes, the Army currently issues passive hearing protection (Combat Arms Earplugs and the Moldex Plug ITE) to Soldiers and has tried an active hearing protection solution — the Tactical Communications and Protection System (TCAPS). While the passive solutions work, they prevent the Soldier from hearing verbal commands clearly. That loss of communication is unacceptable to the dismounted Soldier. This means that the Army needs to pursue an active hearing protection solution. TCAPS has reached the end of its lifecycle due to its lack of interoperability with new radios entering the force. This has placed our Soldiers at risk and created a gap in connectivity to the Army's communication network.

To address this gap, SRD is creating a new requirement that will yield a new material solution under the TAC-HP program. SRD is looking to ultimately field a TAC-HP system that does the following: facilitates command and control, is interoperable with current and future military radios, controls steady state and impulse noise attenuation, allows for audio situational awareness, and empowers configuration control in the Adaptive Squad Architecture. To fulfill this requirement, SRD is primarily exploring two types of solutions: "in-the-ear" or "over-the-ear" styles.

In conclusion, SRD and its partners in the acquisition community are seeking to provide the Army with an advanced communication and hearing protection device that will continue to ensure the success of Soldiers on the battlefield. SRD is currently writing its requirements document and expects to see it approved in mid-fiscal year 2021. This approval will then trigger the acquisition community to produce a much-needed material solution for our Soldiers. What that solution will look like is still to be determined, but SRD does know that it will provide the right capability to our Soldiers.

Notes

¹ S.L.A. Marshall, *Men Against Fire: The Problem of Battle Command* (S.L.A. Marshall, 2019), 63.

² LTC John A. Merkley, Army Hearing Program Manager - Army Public Health Center, and LTC Martin B. Robinette, Army Audiology Liaison – DoD Hearing Center of Excellence, DHA/J9, Slide Presentation: Hearing Health in the Army, Slide 2.

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https://usacac.army.mil/sites/default/files/publications/GTA_19_10_007_Doctrine_SmartCard_web_22JUN2020.pdf

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<https://usacac.army.mil/sites/default/files/publications/CajunBayou.pdf>

