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Updated April 28, 2026

U.S. Army's Maneuver Short-Range Air Defense (M-SHORAD) System—SGT Stout

Background

The Army is developing a new maneuver short-range air defense system (M-SHORAD) to perform short-range air defense (SHORAD). On June 14, 2024, the Army designated the M-SHORAD the "SGT Stout" in honor of Sergeant (SGT) Mitchell William Stout, an Air Defense Artillery (ADA) soldier who won the Congressional Medal of Honor during the Vietnam War. In the early 2000s, the Army divested SHORAD ADA units from Army force structure to free up personnel to create other types of units deemed more mission critical at the time. After 2005, SHORAD force structure was reduced to two battalions of Active Component (AC) Avenger systems and Counter-Rocket, Artillery, and Mortar (C-RAM) batteries and seven Army National Guard (ARNG) Avenger battalions. Since 2005, there has been a dramatic increase in air and missile platforms threatening U.S. ground forces. The use of uncrewed aerial systems (UASs)—also referred to as drones—has increased exponentially, and UASs have been used successfully in a variety of conflicts, including the current Ukrainian and Iranian conflicts. Given the increase in threat and limited air defense assets available to Army units, the Army decided to improve the air defense posture of its maneuver forces.

Initial M-SHORAD Requirement and Unit Fieldings

In response to the growing aerial threat, the Army originally planned to field 144 M-SHORAD Increment 1 systems (**Figure 1**) to 4 battalions. Initially, each M-SHORAD battalion was to consist of 40 M-SHORAD systems, support vehicles and equipment, and about 550 soldiers. In April 2021, the 5th Battalion, 4th Air Defense Artillery Regiment, received the first 4 of its M-SHORAD systems and became fully equipped in late 2022.

According to the Army, the following M-SHORAD units, now consisting of 36 SGT Stout vehicles per battalion, have been fielded:

- 5-4th ADA—Germany;
- 4-60th ADA—Fort Sill, OK;
- 6-56th ADA—Fort Hood, TX; and
- 3-4th ADA (two-thirds of unit fielded; full completion by the end of FY2026)—Fort Bragg, NC.

Future fieldings include

- Florida Army National Guard (ARNG)—FY2028; and
- Ohio ARNG—FY2029.

M-SHORAD Variants/Increments

Initially, the Army planned three M-SHORAD variants, or "Increments."

Figure 1. M-SHORAD Increment 1

Source: Leonardo DRS, "SGT Stout M-SHORAD," 2025.

M-SHORAD Increment 1

M-SHORAD Increment 1 (**Figure 1**) was developed under the Other Transaction Authority contracting process and uses the M-1265A1 Stryker Double V Hull combat vehicle as its chassis. The weapons and radar packages are configured by Leonardo DRS and then installed on the Stryker by General Dynamics Land Systems (GDLS), the vehicle's original manufacturer. M-SHORAD Increment 1's configuration includes

- eight FIM-92 Stinger missiles for aerial targets in a dual launcher (configured by Raytheon);
- an XM914 30 mm automatic cannon;
- an M-240 7.62 mm machine gun; and
- a multi-mission radar.

Figure 2. M-SHORAD Increment 2

Source: Venetia Gonzales, "DE M-SHORAD Inducted into Fort Sill Museum, Marking a New Era in Air Defense & Tactical Innovation," June 12, 2025.

M-SHORAD Increment 2

M-SHORAD Increment 2 (**Figure 2**) is also referred to as DE (Directed Energy) M-SHORAD and incorporates a 50 kilowatt (kW) laser as its primary armament to defend against a variety of air and artillery threats. Efforts to develop the 50 kW laser began in 2019, and in 2021, Raytheon was awarded a $123 million developmental contract after a competitive shoot-off against Northrop Grumman. An Army official noted "that [50-kilowatt] power level is proving challenging to incorporate into a vehicle that has to move around constantly—the heat dissipation, the amount of electronics, kind of the wear and tear of a vehicle in a tactical environment versus a fixed site." Army plans called for M-SHORAD Increment 2 to start a user assessment beginning in the fourth quarter of FY2023 and running through the first quarter of FY2024.

According to the Army, after the completion of the FY2023-FY2024 user assessment, the decision was made that no further procurement efforts would be undertaken, and the system would not be fielded to operational units.

M-SHORAD Increment 3

The Army reportedly plans for M-SHORAD Increment 3 to build on the Increment 1 system and incorporate the FIM-92 Stinger replacement missile—the Next Generation Short Range Interceptor (NGSRI)—into the Increment 1 system. In March 2023, the Army selected Lockheed Martin and Raytheon Technologies to develop competing NGSRI prototypes. The NGSRI had its first successful test flight in late 2025, and the Army plans for continued developmental testing in 2026 through 2027 and then intends to select a single vendor in FY2028.

In addition to the NGSRI, Increment 3 is to have existing system 30 mm automatic cannons receive the Picatinny Arseanal-developed XM 1223 Multi-Mode Proximity Airburst munition (MMPA). The XM1223 is planned to be fielded in late FY2028 and is to feature a multipurpose munition that can be employed against air, ground, and personnel targets.

Army Issues a Request for Information for M-SHORAD Increment 4

On May 8, 2024, the Army issued a request for information (RFI) for M-SHORAD Increment 4, stating that this capability is to focus on delivering "air defense capability to support dismounted maneuver." M-SHORAD Increment 4 is to include capabilities that can be transported on a C-130 aircraft and that are air-droppable and sling load-capable. While the Army describes Increment 4 as "vehicle agnostic and self-contained," the Army would like it to be capable of integration onto platforms such as the Joint Light Tactical Vehicle (JLTV), the Infantry Squad Vehicle (ISV), and/or a robotic vehicle. The Army requested RFI responses from industry by July 16, 2024, and plans for a Increment 4 initial operational capability by late FY2029, with the first planned fielding to units at Fort Bragg, NC.

FY2027 M-SHORAD Budget Request

The Army's FY2027 M-SHORAD Procurement Budget Request is $712.7 million for 14 SGT Stout systems.

The Army's FY2027 M-SHORAD Research, Development, Test, and Evaluation (RDT&E) Budget Request for $460.9 million includes the following:

- $215.1 million to provide an NGSRI to replace the current Stinger missile;
- $94.8 million for DE enhancements to increase system performance and subsystem upgrades to address C-RAM and counter rotary wing (RW) threats.
- $108.1 million for Increment 4 short range air defense capability for Joint Forcible Entry (JFE) and Mobile Brigade Combat Team (MBCT) forces.

Potential Considerations for Congress

Oversight questions Congress could consider include the following.

Lessons Learned from the Russo-Ukraine and Iranian Conflicts

The ongoing Ukrainian and Iranian conflicts feature the use of a variety of aerial systems employed in both kinetic and nonkinetic roles. In addition to fixed and RW air threats, loitering munitions (also known as kamikaze or suicide drones) also have been employed with considerable effect. Lessons learned related to the employment of the aforementioned systems may inform current and future development of M-SHORAD variants. Congress may consider what efforts have been undertaken by the Army to incorporate conflict-related lessons learned into M-SHORAD design.

M-SHORAD and the 2025 Army Transformation Initiative

In May 2025, Army leadership announced the Army Transformation Initiative (ATI) intended to implement "a comprehensive transformation strategy." While this announcement did not make specific references to additional M-SHORAD force structure apart from original 2024 plans, the FY2026 Army Budget Overview stated that the Army planned to "accelerate M-SHORAD procurement" and intended to invest "$2.0 billion in key air defense capabilities, including M-SHORAD ($729 million)." Given this level of FY2026 M-SHORAD investment, Congress might wish to seek further

clarification from the Army on its FY2026 plans for M-SHORAD growth. Furthermore, Iran's successful use of one-way attack drones against U.S. forces and installations in the Middle East as part of the ongoing conflict might modify the Army's pre-conflict ATI plans for M-SHORAD growth.

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IF12397

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