

Picatinny secures four of the Army's 2011 top ten inventions

U.S. Army

PICATINNY ARSENAL, N.J. (Oct. 1, 2012) -- Four more Picatinny Arsenal products have been added to the 2011 list of inventions chosen by Soldiers to be named "Army Greatest Inventions."

Announced by the U.S. Army Research Development and Engineering Command in a news release on Sept. 19, the recipients of the award are recognized for their inventiveness, contribution to Army capabilities and potential benefit outside the Army.

The award winners are chosen by a panel of noncommissioned officers with recent combat experience along with field-grade officers from the U.S. Army Training and Doctrine Command. The awards will be presented at a ceremony in the spring of 2013.

The winning entries are particularly meaningful for the Picatinny community because the Army Greatest Inventions, or AGI, Award is considered somewhat of a "Soldier's Choice Award."

Since the Army Greatest Inventions Awards began in 2002, Picatinny teams have won 34 of the 90 greatest inventions awarded through 2011.

The winning inventions from Picatinny were submitted by the U.S. Army Armament Research Development and Engineering Center, or ARDEC, which contributed members to the development teams for the selected products. The Picatinny Greatest Inventions for 2011 are:

- 120mm Accelerated Precision Mortar Initiative, or APMI, Cartridge, managed by Project Manager for Combat Ammunition Systems
- M2A1 Cal .50 Machine Gun, managed by Project Manager for Soldier Weapons
- M982 Excalibur Increment 1a-2, 155MM Extended Range Precision Guided Projectile managed by Project Manager Combat Ammunition Systems
- Precision Lightweight Universal Mortar Setter System managed by Project Manager Combat Ammunition Systems

"It's an honor to have four Picatinny products selected as 2012 Army Greatest Inventions," said Brig. Gen. Jonathan A. Maddux, Picatinny senior commander and Program Executive Officer Ammunition, which oversees the Project Manager for Combat Ammunition Systems. "These awards are selected by Soldiers -- the men

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and women who depend on our products to keep them safe. To have their stamp of approval on our systems validates the work we do day-to-day."

"The teams take great pride in invention and leading edge technology development, but what I think the Soldiers appreciate most is that they don't have to be burdened with technology," said Director of the ARDEC Gerardo Melendez. "To them the products are easy to use and they can concentrate on that job and not the technology."

"I think that is a big part of why we have always been well represented in the Army Greatest Invention awards," Melendez said.

"We understand the importance of the combined work of our PM and ARDEC teams and will continue to develop innovative, reliable and life-saving equipment for our troops," Maddux said.

Below is more information on the greatest inventions winners from Picatinny:

120mm Accelerated Precision Mortar Initiative, or APMI, Cartridge

A 120mm Global Positioning System-guided mortar cartridge provides infantry commanders with new precision-strike capability. It replaces the current fuse in the standard M934 HE round with modifications to the fuse well and fin configuration to provide low-cost guidance capability that significantly improves the mortar round accuracy. The GPS coordinates are input from the current mortar lightweight or standard mortar ballistic computers with the addition of a Precision Lightweight Universal Mortar Setter System. The key to its enhanced performance is the GPS acquisition time and ability to maintain tracking throughout the cartridge's high angle of fire.

M2A1 Cal .50 Machine Gun

The M2A1 is an enhancement to the .50-caliber M2, including a modified barrel, barrel extension, barrel support, barrel handle, flash suppressor and a fixed headspace and timing configuration. The M2A1 is an automatic, recoil-operated, link-belt-fed, air-cooled, crew-served weapon. It can fire single-shot and automatic and capable of right- and left-hand feed. The enhancements increase durability and Soldier safety by minimizing malfunctions and injuries in the field.

"The M2A1 builds upon the legend of a phenomenal weapon system," said Lt. Col. Thomas Ryan, Product Manager Soldier Weapons. "Soldiers already rank the M2 among the most effective weapon systems in their arsenal. The upgrades we've incorporated will keep this weapon system relevant well into the future for Warfighters across the services."

M982 Excalibur Increment 1a-2, 155MM Extended Range Precision Guided Projectile

Excalibur is a Global Positioning System-guided 155mm projectile that flies a ballistic trajectory during its ascending branch, then a guided trajectory during its

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descending branch to preprogrammed target coordinates. It provides precision guidance and dramatically improves accuracy to less than 10 meters compared with hundreds of meters for conventional artillery ammunition. Excalibur's precision helps to reduce collateral damage. The Excalibur program is being developed in incremental capabilities. The M982 1a-2 increment provided increased GPS countermeasure performance, increased reliability, and extended range.

Precision Lightweight Universal Mortar Setter System

PLUMSS is a highly transportable, all-weather, rapid response, indirect fire control system that is capable of programming the world's first precision guided 120mm mortar cartridge. It uses GPS for precision that can provide indirect fire support that decreases the ammunition expenditure rate, limits collateral damage and provides accurate first round effects on target. Interoperability among already fielded platforms eliminates the need for additional resources for training and sustainment while providing valuable lessons learned during development. PLUMSS uses the Global Positioning System to acquire the precision to support widely dispersed Combat Outposts and operations at the lowest tactical echelons.

Other winners of the greatest inventions award for 2011 are Caiman Explosively Formed Penetrator Add-on-Armor Kits; helmet sensors; Level 2 Manned-Unmanned Teaming for the OH-58D Kiowa Warrior Helicopter; OH-58D Common Missile Warning System; and the Pelvic Protection System.

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