

A sight for sore eyes: New accuracy for 60mm mortars

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The Office of Naval Research TechSolutions 60mm mortar prototype electronic Fire Control Unit (FCU) utilizes a mini red dot sight for day aiming and has laser capabilities for improved night fire accuracy when using the mortar in the handheld mode. The FCU also contains an onboard ballistic library allowing for multiple cartridge employment. ONR TechSolutions accepts recommendations and suggestions from Navy and Marine Corps personnel on ways to improve mission effectiveness through the application of new technology. Credit: US Navy photo by John F. Williams/Released

The handheld mortar has long been a staple for the U.S. Marine Corps, and yesterday the weapon got a major boost as combat instructors at Marine Corps Base Quantico successfully conducted a live-fire demonstration of a new mortar sight, sponsored by the Office of Naval Research (ONR).

The prototype sight, called a Fire Control Unit (FCU), attaches by hand near the muzzle of a 60mm mortar, and provides users with a dramatic increase in target accuracy, most notably at night.

"The nighttime capability is awesome—I mean awesome," said Sgt. Garrett Dennard, mortars assistant instructor for the Infantry Officer Course. "At night by the second round, I trusted it 100 percent."

Until now, Marines have had to rely on their eyes for aim, looking over the end of the barrel at a given target, resulting in greater inaccuracies.

Tests with the new sight were so successful that six prototypes have been requested by Marine Corps units in Afghanistan, and are currently en route.

The sight is designed to easily attach to the upper portion of the barrel, and is small enough to fit in a uniform pocket. It was developed after a chief warrant officer made a request to ONR's TechSolutions program for a technology that improves the weapon's accuracy.

"This is a true success story," said Tom Gallagher, who heads TechSolutions. "It's going to save lives."

TechSolutions takes requests from Sailors and Marines and works with scientists and engineers to provide technology solutions, usually within a 12- to 18-month timeframe.

In addition to the new sight itself, ONR-funded improvements include a new lightweight sling for easier transport that has a heat shield built into it to protect the user's hands.

A lightweight mount is part of the new sling, designed to eliminate the loud clanging that accompanied the old mount as it banged against the mortar in transit—a potentially deadly giveaway of position when on the move.

"The new sling and sight overall are really important additions to the weapon," said Dennard.

Working in conjunction with U.S. Marine Corps Forces, Pacific Experimentation Center, TechSolutions partnered with L3 Insight Technologies on the sight, and with Tactical Assault Gear Industries for the sling/heat shield.

The new sight and sling could also provide substantial financial savings over the long term, experts say.

"If our guys can tee up targets at a quicker pace, and hit their targets with less shots, that's a clear win not only on the battlefield, but in the cost category—which ultimately allows more training and opportunities for our warfighters," said Gallagher.

Provided by Office of Naval Research

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