AFRL

AFRL'S QUICKSINK WEAPON DEMO

DELIVERING KEY CAPABILITIES TO THE JOINT WARFIGHTER

WHAT IS IT?

QUICKSINK is a Joint Capability Technology Demonstration (JCTD) that rapidly integrates and demonstrates Department of the Air Force technology which creates air-delivered, low-cost, surface vessel defeat capability for the warfighter.

Key to the demonstration is the Air Force Research Laboratory development of a Weapon Open Systems Architecture (WOSA) seeker for precision targeting of maritime surface vessels at a low-cost.

HOW DOES IT WORK?

This JCTD uses an existing guidance kit integrated with the new seeker to rapidly demonstrate the capability at minimal costs.

FACTS ABOUT QUICKSINK

- QUICKSINK demonstrates a new, low-cost, air-delivered capability for defeating surface vessels.
- The rapid integration of the AFRL Weapon Open Systems Architecture (WOSA) seeker technology drives down costs by providing modularity and the ability to plug-and-play different manufacturers' seeker components.
- QUICKSINK is an answer to the need to quickly neutralize menacing maritime threats over vast areas around the world.

Four QUICKSINK test items are seen loaded on F15-E Strike Eagle from 85th Test & Evaluation Squadron in this picture released along with its announcement about QUICKSINK test in Aug 2021. (Photo Credit: U.S. Air Force photo by 1st Lt Lindsey Heflin)

The WOSA seeker also allows the technology to be included on a variety of current and future weapons systems and enables them to engage static and moving maritime targets.

QUICKSINK is not a mine and is intended to have an immediate effect on stationary or moving maritime targets.

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WHY IS IT IMPORTANT?

Torpedoes, such as the heavyweight MK-48, are still the primary method used to sink enemy ships. New methods explored through QUICKSINK may be able to achieve the same kind of anti-ship lethality with air-launched weapons, including modified 2,000-pound class precision-guided bombs.

A Navy submarine has the ability to launch and destroy a ship with a single torpedo at any time, but by launching that weapon, it gives away its location and becomes a target. The QUICKSINK JCTD aims to develop a low-cost method of achieving torpedo-like seaworthy kills from the air at a much higher pace and over a much larger area than covered by a lumbering submarine.

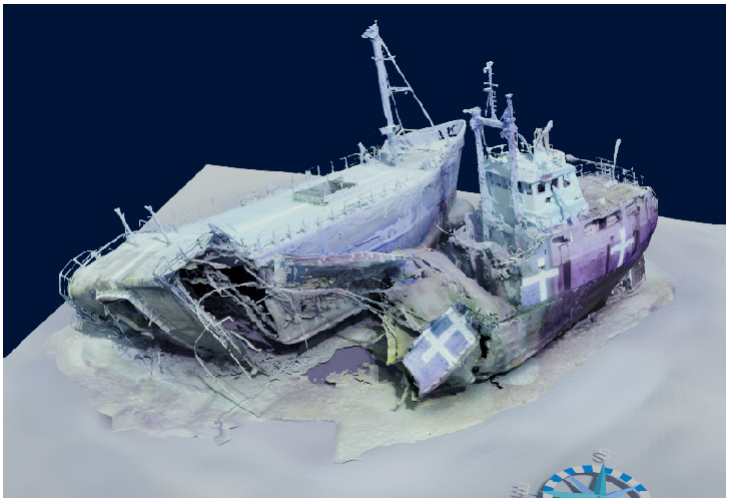
QUICKSINK exploitation of WOSA drives down the cost of the most expensive part of the weapons system and provides the modularity and ability to plug-and-play different manufacturers' seeker components to further reduce costs or enhance performance.

QUICKSINK is an answer to the need to quickly neutralize menacing maritime threats over vast areas around the world. QUICKSINK is unique because it can provide new capabilities to existing and future DoD weapons systems, giving combatant commanders and our national leaders new ways to defend against maritime threats.

ABOUT AFRL

The Air Force Research Laboratory (AFRL) is the primary scientific research and development center for the Department of the Air Force. AFRL plays an integral role in leading the discovery, development, and integration of affordable warfighting technologies for our air, space, and cyberspace force. With a workforce of more than 11,500 across nine technology areas and 40 other operations across the globe, AFRL provides a diverse portfolio of science and technology ranging from fundamental to advanced research and technology development. For more information, visit: **www.afresearchlab.com.**

The QUICKSINK test item displaying classic girder-whipping in QUICKSINK Experiment 2. Photo Credit: AFMC 96 RANSS/RNRD



QUICKSINK Experiment 2, the Coastal Sea broken on the bottom of the Gulf of Mexico. Image Credit: Okaloosa County, FL, Artificial Reef Office