

US Navy fires Tomahawk missile 7 April 2017

Our illustration shows the guided-missile destroyer USS *Ross* (DDG 71) firing a Tomahawk land attack missile on 7 April 2017.

USS *Ross*, an Arleigh Burke-class guided-missile destroyer, forward-deployed to Rota, Spain, is conducting naval operations in the US 6th Fleet area of operations in support of US national security interests in Europe and Africa.

This class of missile is a long-range, all-weather, subsonic cruise missile. Introduced by McDonnell Douglas in the 1970s, it was initially designed as a medium to long-range, low-altitude missile that could be launched from a surface platform. It has not been stated by USN which version is being fired in the attached photograph.

According to Raytheon, today's manufacturer of the missile, the Tomahawk Block IV cruise missile can circle for hours, shift course instantly on command and beam a picture of its target to controllers halfway around the world before striking with pinpoint accuracy.

Tomahawk can be launched from a ship or submarine and can fly into heavily defended airspace more than 1,000 miles away to conduct precise strikes on high-value targets with minimal collateral damage. In Raytheon's words: '*Launching the weapon from such a long distance helps to keep sailors out of harm's way*'.

The Tomahawk is a highly accurate, GPS enabled precision weapon that has been used over 2,000 times in combat, and flight tested more than 500 times.

During the NATO-led effort against the regime of Libyan leader Moammar Gadhafi in 2011, Tomahawk played an instrumental role in the operation. One submarine fired more than 90 missiles at a variety of targets, and the USS *Barry* fired the 2,000th Tomahawk in combat.

The latest variant (Tomahawk Block IV) includes a two-way satellite data-link that enables the missile to be retargeted in flight to pre-programmed, alternate targets. The Block IV design was initiated as both a cost savings and a capability improvement effort.

Raytheon and the US Navy are now enhancing this already sophisticated weapon. Planned upgrades to the Tomahawk Block IV include: upgraded communications, a more powerful warhead, and a new seeker designed to hit

moving targets at sea or on land in darkness and all kinds of weather. The multi-mode seeker test is scheduled for later this year (2017) it is understood.

A Raytheon film showing a launch in the Red Sea some years back can be seen here: <https://www.youtube.com/watch?v=H9034BawdX4&app=desktop>

Picture caption

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