

US DDG 1000 Stealth Destroyer Program:

The stealthy DDG 1000 Zumwalt-class destroyer is a class of United States Navy guided-missile destroyers designed as multi-mission stealth ships with a focus on land attack using a modern version of a turbo-electric drive. It was designed to replace the Arleigh Burke class as a multi-role class with a primary role of naval gunfire support and secondary roles of surface warfare and anti-aircraft warfare.



Originally, 32 ships were planned, with \$9.6 billion research and development costs spread across the class. As costs overran estimates, the quantity was reduced to 24, then to 7, and finally to 3. In 2005 the Navy suggested that the Zumwalt class be shelved in preference for more Arleigh Burke class Destroyers. However with urging by the Congressional districts affected, the Congress authorized the first three Zumwalt class ships which ended up costing \$22.4 billion in research and development, making them the Navy's costliest destroyer at the time.

The ship was designed around its two Advanced Gun Systems (AGS), turrets with 920 round magazines, and unique Long Range Land Attack Projectile (LRLAP) ammunition. However, LRLAP procurement was canceled, rendering the guns unusable, so the Navy re-purposed the ships for surface warfare. Starting in 2023, the Navy is removing the AGS from the ships and is replacing them with hypersonic missiles, a move which would bring new tactical opportunities for maritime warfare commanders looking to launch long-range precision attacks from the sea.

Despite their cost, the Zumwalts still lack several vital features, including anti-ship missiles, anti-submarine torpedoes, and long-range area-air defense missile and have been plagued by equipment problems, suffering from poorly functioning weapons, stalling engines, and under performance in their stealth capabilities. Among other shortcomings; they failed almost entirely to fulfill the originally intended role of multipurpose destroyer warships.

The Zumwalt program has subsequently been replaced with an upgraded DDG 51 Arleigh Burke Class destroyer program.

China's Stealth Type-055 Destroyer Program:

China's Type-055 destroyer looks like a hybrid blend between the stealthy Zumwalt class destroyers and greatly up-gunned U.S. Navy DDG 51 Arleigh Burke-class destroyers.

It has concentrated Vertical Launch Systems, a smoother, straighter hull configuration with fewer radar signature-increasing protruding structures such as guns on the side, deck, masts, or antennas.



Unlike the nearly completely smoothed over Zumwalt class deck and hull structure, the Chinese Type-055 does have DDG 51-like protruding antennas on its back half, something which could reduce its stealth properties by virtue of being vertical structures likely to be detected by radar return "pings" and also emit a potentially detectable electromagnetic signature.

Type 055 destroyers are engineered for multi-mission operations to include land-attack, open water maritime warfare and anti-submarine missions. The new Chinese ships are armed with rocket-propelled torpedoes, operate sub-hunting helicopters, and advanced sonar systems.

On April 3, 2023, the Chinese Communist Party (CCP), posted on its news website a report titled "Four Type 055 Destroyers escort the aircraft carrier Liaoning to break through the Island Chains." The article provides information about the Type 055 destroyers being commissioned by the Chinese Navy, and particularly the Wuxi, which recently passed a full combat-readiness test.

According to the article, Type 055 destroyers "are equipped with the Chinese Navy's most advanced air defense, anti-missile, anti-ship and anti-submarine weapons, with strong information perception, command and coordination, air defense and anti-missile, sea-to-sea and sea-to-land strike capabilities."

"The 13,000-ton Type 055 guided missile destroyer has been praised by U.S. media as the world's second most powerful guided missile destroyer after the now canceled U.S. Zumwalt-class.

From January 2020, when Nanchang, the first Type 055 destroyer, came into service, to February 2023, in this short period of time, 8 of this class have been built. Among the existing Type 055 large guided-missile destroyers, Nanchang (101), Lhasa (102), Anshan (103), and Wuxi (104) were assigned to the first destroyer detachment of the North Sea Fleet (the PLA Northern Theater Command Navy). Dalian (105), Yan'an (106), Zunyi (107) and Xianyang (108) have been incorporated into the ninth destroyer detachment of the South Sea Fleet.

By comparison, the U.S. has built only three Zumwalt-class destroyers. Subject to correction of engineering design problems including removal of the two 155 mm Advanced Gun System (AGS) mounts and replacement with the Conventional Prompt Strike (CPS) system; the DDG 1000 will continue class developmental and integrated at-sea testing, as well as participate in fleet employment opportunities prior to commencing Pacific fleet Conventional Prompt Strike (CPS) installation in October 2023.

DDG 1001 is conducting Pacific Fleet Post Shakedown Availability November 2022-May 2023 with planned upgrades later.

As a result at this time, the Type 055 destroyers have more active robust comprehensive capabilities in service.