CG 70 Lake Erie [Ticonderoga Baseline 4, VLS] - 2015 CMP, SM-3, AEGIS BMD, SM-6

United States



Type: CG - Guided Missile Cruiser
Max Speed: 35 kt
Commissioned: 2015
Length: 172.8 m
Beam: 16.8 m
Draft: 9.6 m
Crew: 379
Displacement: 8910 t
Displacement Full: 9466 t
Propulsion: 4x General Electric LM-2500 Gas Turbines, COGAG

Sensors / EW:
- AN/SQS-53C(V)1 - Hull Sonar, Active/Passive, Hull Sonar, Active/Passive Search & Track, Max range: 74.1 km
- TB-37/U MFTA [AN/SQR-20] - (2010, CG Version) TASS, Active/Passive Towed Array Sonar System, TASS, Active/Passive Towed Array Sonar System, Max range: 129.6 km
- AN/SPY-1B MFR [ABM Mod] - (2010, CG Version) Radar, Radar, FCR, Surface-to-Air, Long-Range, Max range: 324.1 km
- AN/SLQ-32A(V)3 [ECM] - (Group, 2010, CMP) ECM, OECM & DECM, Offensive & Defensive ECM, Max range: 0 km
- AN/SLQ-32A(V)3 [ESM] - (Group, 2010, CMP) ESM, ELINT, Max range: 926 km
- AN/SPG-62 [Mk99 FCS, ABM Mod] - (Group, 2010, CMP) Radar, Radar Illuminator, Long-Range, Max range: 305.6 km
- AN/SPS-55 - (Group, 2010, CMP) Radar, Radar, Surface Search & Navigation, Max range: 64.8 km
- AN/SPQ-9B - (2001) Radar, Radar, Target Indicator, 3D Surface-to-Air & Surface-to-Surface, Max range: 46.3 km
- AN/SPS-64(V)9 [RM 1220 6X] - (20kW, USN, 1x antenna) Radar, Radar, Surface Search & Navigation, Max range: 37 km
- Mk20 Mod 0 DIS [CCD] - (Group, 2010, CG 47, CMP) Visual, LLTV, Weapon Director & Target Search, Slaved Tracking and Identification, Max range: 185.2 km
- Mk20 Mod 0 ELRF [Laser Rangefinder] - (Group, 2010, CG 47, CMP) Laser Rangefinder, Laser Rangefinder for Weapon Director, Max range: 0 km
- Mk20 Mod 0 TIS [IR] - (Group, 2010, CG 47, CMP) Infrared, Infrared, Weapon Director & Target Search, Slaved Tracking and Identification Camera, Max range: 185.2 km
- Kingfisher - (Group, 2010, CG 47, CMP) Hull Sonar, Active-Only, Hull Sonar, Active-Only Mine & Obstacle Avoidance, Max range: 1.1 km

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Weapons / Loadouts:
- Mk46 NEARTIP Mod 5A(S) - (1997) Torpedo. Subsurface Max: 7.4 km.

- Mk50 Barracuda Mod 0 ALWT - (1991) Torpedo. Subsurface Max: 7.4 km.
- Mk54 LHT Mod 0 - (2004) Torpedo. Subsurface Max: 7.4 km.
- RGM-84G Harpoon ICR - (1998) Guided Weapon. Surface Max: 138.9 km.
- 25mm/75 Bushmaster Mod 2 Burst [12 rnds] - Gun. Air Max: 1.5 km. Surface Max: 2.8 km. Land Max: 2.8 km.
- 20mm/100 Mk15 Phalanx Blk 1B Burst [300 rnds] - Gun. Air Max: 1.5 km. Surface Max: 1.9 km.
- 12.7mm/50 MG Burst [10 rnds] - (Facility/Ship, No Anti-Air Capability) Gun. Surface Max: 1.9 km. Land Max: 1.9 km.
- 127mm/62 Mk187 HE-MFF [Mk64 HiCap Body, Mk419 Fuse] - (2009, Land, ASuW, AAW, Multi-Function Fuze) Gun. Air Max: 2.8 km. Surface Max: 22.2 km. Land Max: 24.1 km.
- 127mm/62 Mk176 Illum-ET [Cargo Body, Mk432 Fuse] - (2006) Gun. Surface Max: 22.2 km. Land Max: 24.1 km.
- 127mm/62 Mk186 HE-MOFN [Mk64 HiCap Body, Mk437 Fuse] - (2015, Land and ASuW, No AAW, Multi-Option Fuze Navy) Gun. Surface Max: 22.2 km. Land Max: 24.1 km.
- RUM-139C VLA [Mk54] - (2008) Guided Weapon. Subsurface Max: 16.7 km.
- RIM-66M-5 SM-2MR Blk IIIB - (2000, AEGIS VLS) Guided Weapon. Air Max: 166.7 km. Surface Max: 46.3 km.
- RIM-161B SM-3 NTW Blk IA - (2007) Guided Weapon. Air Max: 370.4 km.
- RGM-109D Tomahawk Blk III TLAM-D - (1996) Guided Weapon. Land Max: 1296.4 km.
- RGM-109C Tomahawk Blk III TLAM-C - (1994) Guided Weapon. Land Max: 1296.4 km.
- RGM-109E Tomahawk Blk IV TACTOM - (2005) Guided Weapon. Land Max: 1600.1 km.
- RIM-66M-2 SM-2MR Blk IIIA - (AEGIS VLS) Guided Weapon. Air Max: 166.7 km. Surface Max: 46.3 km.
- RIM-156A SM-2ER Blk IV [Anti-ASBM Mod] - (2009, 75 rnds) Guided Weapon. Air Max: 240.8 km. Surface Max: 46.3 km.
- RIM-174A ERAM SM-6 Blk IA - (2017, ABM, Anti-Surface) Guided Weapon. Air Max: 426 km. Surface Max: 426 km.
- RIM-162A ESSM - (2004, AEGIS, Mk41) Guided Weapon. Air Max: 55.6 km. Surface Max: 46.3 km.
- RIM-161C SM-3 NTW Blk IB - (2014) Guided Weapon. Air Max: 370.4 km.
- RGM-109I Tomahawk Blk IV MMT [Multi-Mission] - (2015, ASuW Capable) Guided Weapon. Surface Max: 1600.1 km. Land Max: 1600.1 km.
- Mk234 Nulka - (2002) Decoy (Expendable). Surface Max: 1.9 km.
- Mk214 Sea Gnat Chaff [Seduction] - (1987) Decoy (Expendable). Surface Max: 1.9 km.
- Mk216 Sea Gnat Chaff [Distraction] - (1988) Decoy (Expendable). Surface Max: 1.9 km.
- Mk245 GIANT Flare - (1997, DM19A1) Decoy (Expendable). Surface Max: 1.9 km.
- AN/SLQ-25A Nixie - Decoy (Towed). Surface Max: 1.9 km.

OVERVIEW: The Ticonderoga-class of guided-missile cruisers is a class of warships in the United States Navy, first ordered and authorized in the 1978 fiscal year. The class uses passive phased-array radar and was originally planned as a class of destroyers. However, the increased combat capability offered by the Aegis combat system and the AN/SPY-1 radar system was used to justify the change of the classification from DDG (guided missile destroyer) to CG (guided-missile cruiser) shortly before the keels were laid down for Ticonderoga and Yorktown.

Ticonderoga-class guided-missile cruisers are multi-role warships. Their Mk 41 VLS can launch Tomahawk cruise missiles to strike strategic or tactical targets, or fire long-range antiaircraft Standard Missiles for defense against aircraft or antiship missiles. Their LAMPS III helicopters and sonar systems allow them to perform antisubmarine missions. Ticonderoga-class ships are designed to be elements of carrier battle groups, amphibious assault groups, as well as performing missions such as interdiction or escort.

DETAILS: The Ticonderoga-class cruiser's design was based on that of the Spruance-class destroyer. The Ticonderoga class introduced a new generation of guided missile warships based on the AEGIS phased array radar that is capable of

simultaneously scanning for threats, tracking targets, and guiding missiles to interception. When they were designed, they had the most powerful electronic warfare equipment in the U.S. Navy, as well as the most advanced underwater surveillance system. These ships were one of the first classes of warships to be built in modules, rather than being assembled from the bottom up.

In addition to the added radar capability, the Ticonderoga-class ships subsequently built after the USS Thomas S. Gates included two Mark 41 Vertical Launching Systems (VLS). The two VLS allow the ship to have 122 missile storage and launching tubes that can carry a wide variety of missiles, including the Tomahawk cruise missile, Standard surface-to-air missile, Evolved Sea Sparrow surface-to-air missile, and ASROC antisubmarine warfare (ASW) guided rockets. More importantly, the VLS enables all missiles to be on full stand-by at any given time, shortening the warship's response time before firing. The original five ships (Ticonderoga, Yorktown, Vincennes, Valley Forge, and Thomas S. Gates) had Mark 26 twin-arm launchers that limited their missile capacity to a total of 88 missiles, and that could not fire the Tomahawk missile. After the end of the Cold War, the lower capabilities of the original five warships limited them to duties close to the home waters of the United States. These ship's cluttered superstructure, inherited from the Spruance-class destroyers, required two of their external radar units to be mounted on a special pallet on the portside aft corner of the superstructure, with the other two mounted on the forward starboard corner. The later AEGIS warships, designed from-the-keel-up to carry the SPY-1 radars, have them all clustered together.

The high weight of these warships - about 1,500 tons heavier than the Spruance class, resulted in a highly stressed hull and some structural problems in early service, which were generally corrected in the late 1980s and mid-1990s. Several ships had superstructure cracks which had to be repaired.

TYPE: Guided Missle Cruiser (CG).

SPECIFICATION: Displacement: Approx. 9,600 long tons (9,800 t) full load || Length: 567 feet (173 m) || Beam: 55 feet (16.8 meters) || Draft: 34 feet (10.2 meters) || Propulsion: (4) General Electric LM2500 gas turbine engines, 80,000 shaft horsepower (60,000 kW) with (2) controllable-reversible pitch propellers. || Complement: 33 officers, 27 Chief Petty Officers, and approx. 340 enlisted.

PERFORMANCE: Speed: 32.5 knots (60 km/h) || Range: 6,000 nmi (11,000 km) at 20 kn (37 km/h); 3,300 nmi (6,100 km) at 30 kn (56 km/h).

SENSORS: AN/SPY-1A/B multi-function radar || AN/SPS-49 air search radar || AN/SPG-62 fire control radar || AN/SPS-73 surface search radar || AN/SPQ-9 gun fire control radar || AN/SLQ-32 Electronic Warfare Suite || AN/SQQ-89(V)1/3 - A(V)15 Sonar suite, consisting of: AN/SQS-53B/C/D active sonar, AN/SQR-19 TACTAS, AN/SQR-19B ITASS, & MFTA passive sonar, AN/SQQ-28 light airborne multi-purpose system || Mark 36 SRBOC || AN/SLQ-25 Nixie.

ARMAMENT: [Mark 26] (2) Mk 26 missile launchers || (68) RIM-66 SM-2 || (20) RUR-5 ASROC || (8) RGM-84 Harpoon missiles || (2) Mark 45 5 in / 54 cal lightweight gun (2-4) .50 cal (12.7 mm) gun || (2) Phalanx CIWS || (2) Mk 32 12.75 in (324 mm) triple torpedo tubes. ##### [Mark 41] (2) 61 cell Mk 41 vertical launch systems with a mix of: RIM-66M-5 Standard SM-2MR Block IIIB, RIM-156A SM-2ER Block IV, RIM-161 SM-3, RIM-162A ESSM, RIM-174A Standard ERAM BGM-109 Tomahawk, RUM-139A VL-ASROC || (8) RGM-84 Harpoon missiles || (2) Mk 45 Mod 2 5-in/54-cal lightweight gun || (2) 25 mm Mk 38 gun || (2-4) .50 cal (12.7 mm) gun || (2) Phalanx CIWS Block 1B || (2) Mk 32 12.75-in (324 mm) triple torpedo tubes for lightweight torpedoes.

AIRCRAFT: (2) Sikorsky SH-60B or MH-60R Seahawk LAMPS III helicopters.

SHIPS BUILT: [Mark 26] Ticonderoga (CG-47), Yorktown (CG-48), Vincennes (CG-49), Valley Forge (CG-50),

Thomas S. Gates (CG-51) ##### [Mark 41] Bunker Hill (CG-52), Mobile Bay (CG-53), Antietam (CG-54), Leyte Gulf (CG-55), San Jacinto (CG-56), Lake Champlain (CG-57), Philippine Sea (CG-58), Princeton (CG-59), Normandy (CG-60), Monterey (CG-61), Chancellorsville (CG-62), Cowpens (CG-63), Gettysburg (CG-64), Chosin (CG-65), Hue City (CG-66), Shiloh (CG-67), Anzio (CG-68), Vicksburg (CG-69), Lake Erie (CG-70), Cape St. George (CG-71), Vella Gulf (CG-72), Port Royal (CG-73).

SOURCE: [SCO] Wikipedia http://en.wikipedia.org