SSN 23 Jimmy Carter [Seawolf Class] - 2008 DDS

United States



Type: SSN - Nuclear Powered Attack Submarine
Max Depth: -450 m
Max Speed: 35 kt
Commissioned: 2008
Length: 137.6 m
Beam: 12.9 m
Draft: 10.7 m
Crew: 134
Displacement: 10580 t
Displacement Full: 11642 t
Propulsion: 1x S6W Nuclear Reactor

Sensors / EW:
- AN/WLR-9B - (AN/BLR-14, Sonar Warning Receiver) Acoustic Intercept (Active Sonar Warning), Acoustic Intercept & Torpedo Warning, Max range: 27.8 km
- AN/BPS-16 - (1996) Radar, Radar, Surface Search, Medium-Range, Max range: 166.7 km
- AN/TB-29 - (1996, 10x Produced) TASS, Passive-Only Towed Array Sonar System, TASS, Passive-Only Thin Line Towed Array Sonar System, Max range: 185.2 km
- AN/TB-34 - (2007, 2600ft Fat-Line) TASS, Passive-Only Towed Array Sonar System, TASS, Passive-Only Fat Line Towed Array Sonar System, Max range: 148.2 km
- AN/BQS-24 MIDAS - (2007, 2600ft Fat-Line) Hull Sonar, Active-Only, Hull Sonar, Active-Only Under-Ice Navigation and Mine & Obstacle Avoidance, Max range: 1.1 km
- AN/BQG-5A WAA [BSY-2] - (Seawolf) Hull Sonar, Passive-Only, Hull Sonar, Passive-Only Ranging Flank Array Search & Track, Max range: 129.6 km
- AN/BQQ-10 [ARCI(V)5] - (Seawolf) Hull Sonar, Active/Passive, Hull Sonar, Active/Passive Search & Track, Max range: 129.6 km
- AN/BLQ-10(V)3 - (Seawolf) ESM, SIGINT (ELINT & COMINT) w/ OTH Targeting, Max range: 926 km
- Type 18 Periscope Optical Component - (Baseline, 1970s+) Visual, Visual, Surveillance Periscope, Max range: 41.7 km
- Generic Submarine Periscope, LLTV - (2000s/2010s, Gen 3, 1.5x/8x Zoom) Visual, LLTV, Surveillance & Navigation Camera, Max range: 41.7 km
- Type 18 Periscope SUBIS Mod QLR IR Component - (1x/2x Zoom) Infrared, Infrared, Day/Night Spherical Situational Awareness & Fire Control, Max range: 27.8 km
- Type 18 Periscope SUBIS Mod IR Component - (3rd Gen, 1.5x/12x Zoom) Infrared, Infrared, Surveillance & Navigation Camera, Max range: 41.7 km

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Weapons / Loadouts:
- SEAL Commando - (Surface & Submarine) Troops.

- UGM-109C Tomahawk Blk III TLAM - (1994, TT) Guided Weapon. Land Max: 1666.8 km.
- UGM-109E Tomahawk Blk IV TACTOM - (2008, TT) Guided Weapon. Land Max: 1600.1 km.
- UGM-109D Tomahawk Blk III TLAM - (1996, TT) Guided Weapon. Land Max: 1296.4 km.
- Mk48 Mod 7 ADCAP CBASS - (2008, Shallow Water) Torpedo. Surface Max: 38.9 km. Subsurface Max: 38.9 km.
- ADC Mk2 Mod 3 Torpedo Decoy - (2007, 3-inch) Decoy (Expendable). Subsurface Max: 1.9 km.
- ADC Mk3 Mod 1 Torpedo Countermeasure - (2004, 6-inch) Decoy (Expendable). Subsurface Max: 1.9 km.
- ADC Mk4 Mod 1 Sonar Jammer - (2004, 6-inch) Decoy (Expendable). Subsurface Max: 1.9 km.
- ADC Mk2 Mod 0 Torpedo Decoy - (1979, 3-inch) Decoy (Expendable). Subsurface Max: 1.9 km.

OVERVIEW: The Seawolf-class is a class of nuclear-powered fast attack submarines (SSN) in service with the United States Navy. The class was the intended successor to the Los Angeles class. Design work began in 1983. At one time, an intended fleet of 29 submarines was to be built over a ten-year period, later reduced to twelve submarines. The end of the Cold War and budget constraints led to the cancellation in 1995 of any further additions to the fleet, leaving the Seawolf class limited to just three boats. This, in turn, led to the design of the smaller Virginia class.

DETAILS: The Seawolf design was intended to combat the threat of large numbers of advanced Soviet ballistic missile submarines such as the Typhoon class and attack submarines such as the Akula class in a deep ocean environment. Seawolf class hulls are constructed from HY-100 steel, which is stronger than the HY-80 steel employed in previous classes, in order to withstand water pressure at greater depths.

Compared to previous Los Angeles class submarines, Seawolf submarines are larger, faster, and significantly quieter; they also carry more weapons and have twice as many torpedo tubes, for a total of 8. The boats are able to carry up to 50 UGM-109 Tomahawk cruise missiles for attacking land and sea surface targets. As in all nuclear submarines, the load out of equipment, weapons and crew affects available excess buoyancy and thus operational parameters. The boats also have extensive equipment to allow for littoral, or shallow water, operations. The class uses the more advanced ARCI Modified AN/BSY-2 combat system, which includes a new, larger spherical sonar array, a wide aperture array (WAA), and a new towed-array sonar. Each boat is powered by a single S6W nuclear reactor, delivering 45,000 hp to a low-noise pump-jet.

As a result of their advanced design, however, Seawolf submarines were much more expensive. The projected cost for twelve submarines of this class was $33.6 billion, but after the Cold War, construction was stopped at three boats.

VARIANTS: On 10 December 1999, Electric Boat was awarded a US$887 million extension to the Carter contract to modify the boat for highly classified missions and testing of new submarine systems, missions previously carried out by USS Parche (SSN-683). Jimmy Carter was christened on 5 June 2004. The ship sponsor was former First Lady Rosalynn Carter.

Carter is roughly 100 feet (30 m) longer than the other two ships of her class. This is due to the insertion of a plug (additional section) known as the Multi-Mission Platform (MMP), which allows launch and recovery of ROVs and Navy SEAL forces. The Ocean Interface (OI) section supports the Multi-Mission Project by opening larger payload apertures to the sea. The resulting modular architecture allows the ship to be configured for specific missions using interchangeable payloads and tailored support services, yet it will preserve the submarine's core mission capabilities for normal tasking. The OI hull insert is unique, with a horizontal "hourglass" configuration that necks the pressure hull down to a "wasp waist," so that when the section is faired over, significant external volume will be available outside the pressure hull, but still within the skin of the ship. This will allow more flexibility in designing and adding systems and storage, while maintaining a smooth hydrodynamic hull shape with minimal impact on the ship's draft.

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Carter will also be capable of supporting Special Operations Forces (SOF), with provision for operating the Dry Deck Shelter (DDS) and Advanced SEAL Delivery System (ASDS).

ARMAMENT: (8) 660-mm torpedo tubes capable of launching (50) Tomahawk cruise missiles - or - (50) Harpoon antiship missiles - or - (50) Mark 48 ADCAP torpedoes - or - up to 100 mines.

SPECIFICATION: Length 353 ft, Beam 40 ft, Displacement 9137 tons, Speed (FAS Estimate) 35 kts, Depth Test (FAS Estimate) 1600 ft, Crew (12) Officers (121) Enlisted.

SHIPS BUILT: Seawolf (SSN-21), Connecticut (SSN-22), Jimmy Carter (SSN-23).

SOURCE: [SCO] Wikipedia http://en.wikipedia.org, FAS Military Analysis Network http://fas.org/man/dod-101/sys/ship/index.html, US Navy http://www.navy.mil