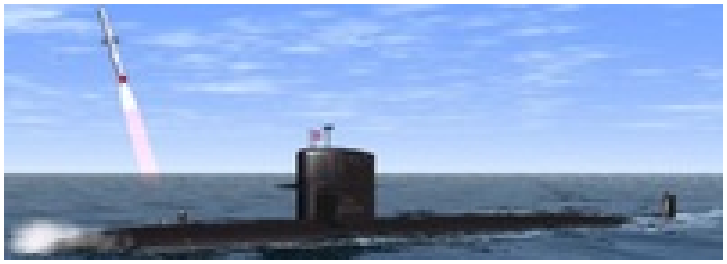
SSN 751 San Juan [Improved Los Angeles Class] - 1996

United States



Type: SSN - Nuclear Powered Attack Submarine
Max Depth: -300 m
Max Speed: 32 kt
Commissioned: 1996
Length: 109.7 m
Beam: 10.1 m
Draft: 9.75 m
Crew: 129
Displacement: 6300 t
Displacement Full: 7147 t
Propulsion: 1x S6G Nuclear Reactor

Sensors / EW:
- AN/WLR-9A - (AN/BLR-14, Sonar Warning Receiver) Acoustic Intercept (Active Sonar Warning), Acoustic Intercept & Torpedo Warning, Max range: 27.8 km
- AN/BPS-15A - (AN/BLR-14, Sonar Warning Receiver) Radar, Radar, Surface Search, Medium-Range, Max range: 166.7 km
- AN/BRD-7 - (AN/BLR-14, Sonar Warning Receiver) ESM, HF/DF, Max range: 926 km
- AN/TB-23/BQ - (1990, 4000ft Thin Line, Narwhal & Los Angeles Only) TASS, Passive-Only Towed Array Sonar System, TASS, Passive-Only Thin Line Towed Array Sonar System, Max range: 129.6 km
- AN/TB-16D - (1996, 2600ft Fat-Line) TASS, Passive-Only Towed Array Sonar System, TASS, Passive-Only Fat Line Towed Array Sonar System, Max range: 129.6 km
- AN/BQQ-5E(V)1 [BQS-13] - (1996, Los Angeles, Assow w TB-16D & TB-29, AN/BQS-24, AN/WLR-9) Hull Sonar, Active/Passive, Hull Sonar, Active/Passive Search & Track, Max range: 74.1 km
- AN/WLR-10 - (Assoc w AN/ALR-8) ESM, RWR, Radar Warning Receiver, Max range: 222.2 km
- AN/BQS-15 - (Assoc w AN/ALR-8) Hull Sonar, Active-Only, Hull Sonar, Active-Only Under-Ice Navigation and Mine & Obstacle Avoidance, Max range: 0.7 km
- AN/BLD-1 - (Assoc w AN/BRD-7) ESM, HF/DF w/ OTH Targeting, Max range: 926 km
- AN/WLR-8(V)6 - (Los Angeles) ESM, ELINT, Max range: 926 km
- Type 18 Periscope Optical Component - (Baseline, 1970s+) Visual, Visual, Surveillance Periscope, Max range: 41.7 km
- Generic Submarine Periscope, LLTV - (1980s/1990s, Gen 2, 1.5x/4x Zoom) Visual, LLTV, Surveillance & Navigation Camera, Max range: 41.7 km

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Weapons / Loadouts:
- Mk48 Mod 5 ADCAP - (1991) Torpedo. Surface Max: 38.9 km. Subsurface Max: 38.9 km.
- UGM-109C Tomahawk Blk III TLAM - (1994, TT) Guided Weapon. Land Max: 1666.8 km.
- UGM-109D Tomahawk Blk III TLAM - (1996, TT) Guided Weapon. Land Max: 1296.4 km.

- UGM-109C Tomahawk Blk II TLAM - (1987-1998, TT) Guided Weapon. Land Max: 2500.2 km.
- UGM-109D Tomahawk Blk II TLAM - (1989-1998, TT) Guided Weapon. Land Max: 2500.2 km.
- ADC Mk3 Mod 0 Sonobuoy Countermeasure - (1992-2004, 6-inch) Decoy (Expendable). Subsurface Max: 1.9 km.
- ADC Mk2 Mod 1 Torpedo Decoy - (1991, 6-inch) Decoy (Expendable). Subsurface Max: 1.9 km.
- ADC Mk4 Mod 0 Sonar Jammer - (1995-2006, 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.
- UGM-109C Tomahawk Blk II TLAM - (1987-1998, VLS) Guided Weapon. Land Max: 2500.2 km.
- UGM-109C Tomahawk Blk III TLAM - (1994, VLS) Guided Weapon. Land Max: 1296.4 km.
- UGM-109D Tomahawk Blk II TLAM - (1989-1998, VLS) Guided Weapon. Land Max: 2500.2 km.
- UGM-109D Tomahawk Blk III TLAM - (1996, VLS) Guided Weapon. Land Max: 1296.4 km.

OVERVIEW:The Los Angeles-class, sometimes called the LA-class or the 688-class, is a class of nuclear-powered fast attack submarines that forms the backbone of the U.S. Navy's submarine force, with 62 submarines of this class being completed.

The final 23 boats (Flight 3) of the Los Angeles class were designed and built to be quieter than their predecessors and also to carry more-advanced sensor and weapons systems. Externally they can be recognized quickly as their retractable diving planes were placed at their bows rather than on their sails.

DETAILS: The LOS ANGELES class SSN specifically included advanced ASW capabilties to counter Soviet submarine threat trying to penetrate American Carrier Battle Groups (CVBG) while including advanced ASUW capabilities to threaten capital ships in the Soviet surface action group (SAG). The LOS ANGELES class SSN was designed almost exclusively for Carrier Battlegroup escort; they were fast, quiet, and could launch Mk48 and ADCAP torpedoes, Harpoon Anti-Ship Missiles (no longer carried), and both land attack and anti-ship (no longer carried) Tomahawk cruise missiles. The new submarines showed another step improvement in quieting and an increase in operating speed to allow them to support the CVBG. Escort duties included conducting ASW sweeps hundreds of miles ahead of the CVBG and conducting attacks against the SAG.

ARMAMENT: Los Angeles class submarines carry about 25 torpedo tube-launched weapons and all boats of the class are capable of launching Tomahawk cruise missiles horizontally (from the torpedo tubes). The last 31 boats of this class also have 12 dedicated vertical launching system (VLS) tubes for launching Tomahawks.

SERVICE: As of late 2013, 41 of the class are still in commission and 21 retired from service. Of the 21 retired boats, 14 of them were laid up half way (approximately 17-18 years) through their projected lifespans due to their mid-life reactor refuelling being cancelled. One boat, USS Miami (SSN-755), was retired due to extensive fire damage caused by arson when she was a few months into a maintenance period. A further four boats were proposed by the Navy, but later cancelled.

SPECIFICATION: Length 360 ft, Beam 33 ft, Displacement 6927 tons, Speed (FAS Estimate) 30-32 kts, Depth Test (FAS Estimate) 950 ft, Crew: (13) Officers (116) Enlisted.

SHIPS BUILT: [Flight I & II] Los Angeles (SSN-688),Baton Rouge (SSN-689), Philadelphia (SSN-690), Memphis (SSN-691), Omaha (SSN-692), Cincinnati (SSN-693), Groton(SSN-694), Birmingham (SSN-695), New York City (SSN-696), Indianapolis (SSN-697), Bremerton (SSN-698), Jacksonville (SSN-699), Dallas (SSN-700), La Jolla (SSN-701), Phoenix (SSN-702), Boston (SSN-703), Baltimore (SSN-704), City Of Corpus Christi (SSN-705), Albuquerque (SSN-706), Portsmouth (SSN-707), Minneapolis-St. Paul (SSN-708), Hyman G. Rickover (SSN-709), Augusta (SSN-710), San Francisco (SSN-711), Atlanta (SSN-712), Houston (SSN-713), Norfolk (SSN-714), Buffalo

(SSN-715), Salt Lake City (SSN-716), Olympia (SSN-717), Honolulu (SSN-718), Providence (SSN-719), Pittsburgh (SSN-720), Chicago (SSN-721), Key West (SSN-722), Oklahoma City (SSN-723), Louisville (SSN-724), Helena (SSN-725), Newport News (SSN-750) ##### [Flight III/688I] San Juan (SSN-751), Pasadena (SSN-752), Albany (SSN-753), Topeka (SSN-754), Miami (SSN-755), Scranton (SSN-756), Alexandria (SSN-757), Asheville (SSN-758), Jefferson City (SSN-759), Annapolis (SSN-760), Springfield (SSN-761), Columbus (SSN-762), Santa Fe (SSN-763), Boise (SSN-764), Montpelier (SSN-765), Charlotte (SSN-766), Hampton (SSN-767), Hartford (SSN-768), Toledo (SSN-769), Tucson (SSN-770), Columbia (SSN-771), Greenville (SSN-772), Cheyenne (SSN-773).

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