Welcome Aboard

The Attack Submarine
USS SAN JUAN (SSN 751)

UNITED STATES SHIP SAN JUAN (SSN 751)

USS San Juan (SSN 751) Vital Statistics

Built by General Dynamics Corporation

Electric Boat Division, Groton, CT

Keel Laid	9 August 1985
Launched	6 December 1986
Sponsor	Mrs. Sherrill Diane Perkins de Hernandez
Commissioned	6 August 1988
Length	360 Feet
Beam	33 Feet
Displacement Surfaced	6135 Tons
Displacement Submerged	6901 Tons
Speed	Over 20 Knots
Diving Depth	Over 400 Feet
Compliment: Officers	15
Compliment: Enlisted	120

COMMANDER ROBERT L. BRANDHUBER

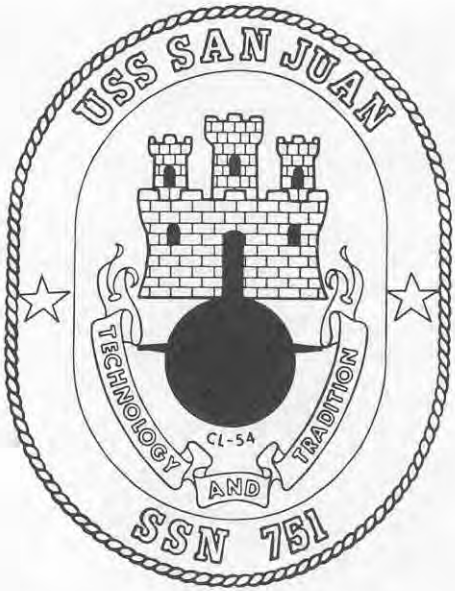
Commander Robert L. BRANDHUBER is a native of Dayton, Ohio. After enlisting in the Navy in August of 1967 and serving aboard USS WRIGHT (CC 2), he earned a scholarship to Purdue University in August of 1970, subsequently graduating with honors in December 1973 with a Bachelor of Science Degree in Mechanical Engineering. He was commissioned an Ensign in the United States Navy and completed nuclear power and submarine training before being assigned to the USS L. MENDEL RIVERS (SSN 686) in Charleston, South Carolina. After qualifying in submarines and as Engineer Officer, he served as the Weapons Officer and then as the Engineer Officer while a Lieutenant (junior grade) including the successful completion of an Operational Reactor Safeguards Examination. While assigned to USS L. MENDEL RIVERS, the ship completed two Mediterranean deployments.

In November 1977, Commander BRANDHUBER reported to the staff of Commander Submarine Group SIX in Charleston, South Carolina, as Engineering Department Training Officer. For the last nine months of his assignment, Commander BRANDHUBER served as the Operations Officer and was responsible for the movements of eight SSBN submarines.

Commander BRANDHUBER served as the new construction Engineer Officer of the third TRIDENT submarine, USS FLORIDA (SSBN 728) from February 1980 until December 1983. The ship delivered ahead of schedule and Commander BRANDHUBER remained aboard for the successful completion of the Demonstration and Shakedown (DASO) sequence.

Commander BRANDHUBER served as the Squadron Material Officer at Submarine Squadron TEN, New London, Connecticut from May 1984 through September of 1986. After Prospective Executive Officer (XO) training, Commander BRANDHUBER reported to the USS WHALE (SSN 638) in December of 1986 and served as XO until August of 1988. While aboard USS WHALE (SSN 638), the ship completed regular overhaul, transited the Panama Canal enroute to her new homeport, and underwent fleet operations in preparation for certification to deploy.

Commander BRANDHUBER has been awarded a Meritorious Service Medal, a Navy Commendation Medal with three Gold Stars in lieu of the second, third and fourth awards, and a Navy Achievement Medal. Commander BRANDHUBER and his wife, Bev, have a daughter, Michelle, and a son, Mike, and reside in Gales Ferry, Connecticut.



Wecome Aboard,

The officers and men of USS San Juan take great pride in extending to you the hospitality of the Submarine Force of the United States Navy. It is our desire to make your stay with us as pleasant as possible. All members of the ship's crew are ready to assist you in any way possible — you have only to ask.

As a warship, San Juan is neither spacious nor designed for large numbers of people. Submariners are accustomed to this environment. If you need assistance or an explanation of the equipment or activities aboard, please do not hesitate to ask any crew member.

This pamphlet is provided as a momento of your visit. It also provides information necessary to ensure your health and comfort while aboard. As your hosts, all of us on San Juan hope your visit will be informative, interesting and pleasant.

Commanding Officer

USS San Juan (SSN 751)

SHIP'S MISSION

USS San Juan (SSN 751) is a fast-attack nuclear submarine of the SSN 688 Class assigned to Commander, Submarine Development Squadron Twelve, New London, Connecticut.

Her primary mission is to seek out and destroy enemy ships. She is equipped with the AN/BSY-1 Integrated Combat Control System, the most advanced sonar and fire control system in the submarine force. She has vertical launch Cruise Missile capabilities as well as four torpedo tubes.

The USS San Juan has been specially designed to operate quietly and indefinitely at high speeds while completely submerged. This gives her great tactical advantage in offensive and defensive action.

USS San Juan is the first of the improved SSN 688 Class who is fully under ice capable.

ACCESS AND CONGESTION

Visitors are always welcome in any authorized space when the operations of the ship permit. Operating and control station space is very limited. As a result, it is necessary for any person not on watch to have permission of proper authority before being allowed in the space. This regulation is in effect at all times and for all persons embarked, including members of the ship's company. You are asked to conscientiously abide by these regulations. If allowed in an area so controlled, you will be requested to leave when necessary. Summarized below are those areas in which access is controlled in this manner and the name of the watchstander who may allow visitors in the area.

Control Room	—	Officer of the Deck Chief of the Watch (when surfaced)
Sonar Control	—	Sonar Supervisor (Note: only authorized personnel are permitted in this space.)
Radio Room	—	Radioman of the Watch (Note: only authorized personnel are permitted in this space.)
Bridge	—	Officer of the Deck: Personnel visiting the Bridge are asked to consult the Chief of the Watch prior to proceeding up the ladder. The Chief of the Watch will obtain necessary permission for visitors to go on the Bridge.
Engine Room	—	Visitors are not routinely permitted in the engineering spaces.

IMPROVED HABITABILITY

The ship is completely air conditioned and has equipment for revitalizing the air. Other facilities include a library, laundry, stereo system, soft drink and ice cream machines.

CAUTION

Do not attempt to operate any equipment, twist knobs, flip switches or turn any valves. There are members of the crew on watch in every compartment to assist you. Please observe all warning signs.

GENERAL INFORMATION

LIVING ACCOMMODATIONS

Berthing is assigned visitors embarking upon their arrival. If possible, lockers will also be assigned. If it occurs that you are required to share a bunk, we request you make arrangements with the others assigned to that bunk in order that no conflicts arise. Please use **only the bunk assigned**. This enables you to be located if necessary.

Heads and washroom facilities are located throughout the ship. Please realize they are maintained by crewmen who consider the ship their home. Before using a head for the first time, please consult a member of the crew for proper flushing procedures. Please do not discard any solid object, no matter how small, into a water closet. If may foul the seat of the sanitary tank overboard discharge valve.

Showers may be taken anytime at your convenience, but because the number of shower facilities is very limited, showers should be taken as expeditiously as possible. There is no restriction on water. However, the ship's water-making capacity, while large, does have reasonable limits. Standard navy showers are encouraged.

Messing arrangements are established prior to your arrival and you are requested to eat at the scheduled time. All meals must be served in shifts, so you are requested to be punctual and not to linger over coffee.

Smoking is permitted in authorized areas. If you smoke please consult a crewman for location of the authorized areas. The smoking lamp is out whenever an emergency occurs.

ORDERS

If you are under military orders, please turn your orders in to the Yeoman in the Ship's Office (Forward Compartment Middle Level in the passageway inboard of the Chief Petty Officer Quarters). The orders will be endorsed and ready for pickup at the end of your visit.

WAKE UP

For embarked visitors, wake up calls are made by the Messenger of the Watch from the Control Room. To request a call, notify the Chief of the Watch in the Control Room.

SECURITY

Certain aspects of the ship's operational characteristics and certain areas of the ship are classified. The Radio Room, Sonar

Room, Combat Systems Equipment Space and the Engine Room are classified areas.

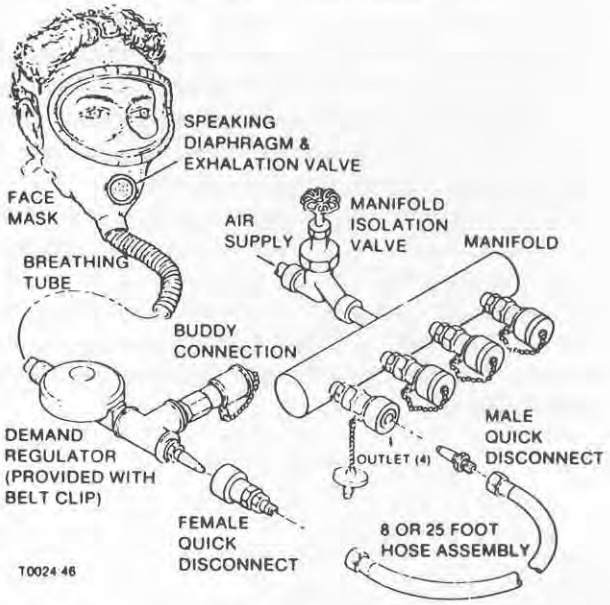
MEDICAL FACILITIES

The Hospital Corpsman should be consulted for any illness or injury that may occur during the underway. It is recommended that those personnel susceptible to motion sickness obtain medication prior to getting underway. However, medication for this purpose will be available throughout the cruise.

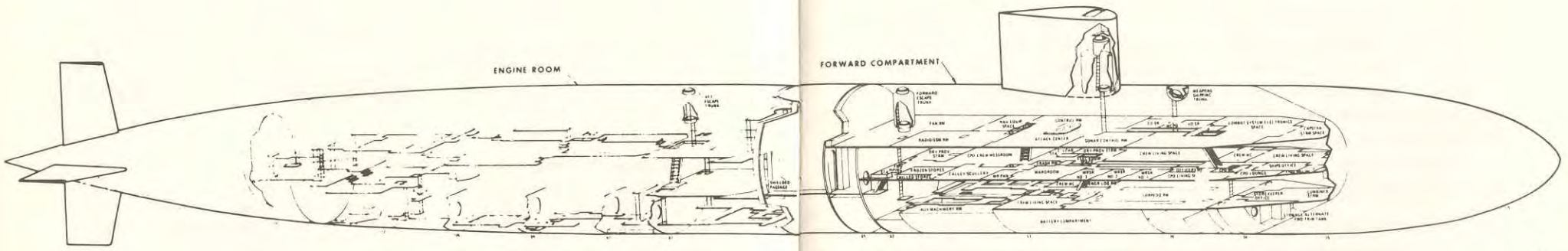
EMERGENCIES

Should any emergency situation arise, alarms will be sounded and the word will be passed. You are requested to stand fast but clear of all passageways and operating areas. Do not obstruct ladders, hatches, or the watertight door. Allow ship's personnel to perform required action without interference. The member of the ship's company in charge at the scene will explain the situation as soon as he is able. Please follow the instructions of the man in charge at the scene without hesitation. In most instances, the best place to be during a casualty or drill is in your berthing space or the mess decks.

EMERGENCY AIR BREATHING MASK INSTRUCTION



Tighten side straps first, then tighten the top strap. Completely loosen all straps upon removal.



THE LOS ANGELES CLASS SUBMARINE

USS San Juan is the latest version of the Los Angeles Class, the Navy's newest class nuclear-powered submarine, and is the most advanced undersea vessel of its type in the world. San Juan's mission is to hunt down and destroy enemy surface ships and submarines.

The Los Angeles Class of submarines is the fastest nuclear propelled submarine in the U.S. Navy. A total of 64 submarines are planned through the Fiscal Year 1989 program with the San Juan being the 40th of this class. These Los Angeles Class Attack Submarines were developed to provide support to the U.S. Carrier Battle Groups and to counter the Soviet third generation Victor Fast Attack Submarines. The Los Angeles Submarines are faster than the previous U.S. Sturgeon Class; the high speed and improved quieting being the principal advantage over the earlier classes. However, several Soviet classes of nuclear submarines (most notably the Alfa) are significantly faster than the Los Angeles Class.

As construction of this class continued, significant improvements were made. The San Juan (SSN 751) had its control planes moved from the sail to the bow and made retractable. The San Juan is provided with other improved features, specifically: under-ice operation capability, vertical launch Tomahawk capability, and improved ship quieting. Although not as apparent as some of the external differences, San Juan (SSN 751) also is equipped with the first AN/BSY-1 Integrated Fire Control/Sonar Control System. This system is the follow-on fire control system to the CSS Mark 1 Fire Control and the AN/BQQ-5 Sonar Suite which were installed in earlier Los Angeles Class submarines.

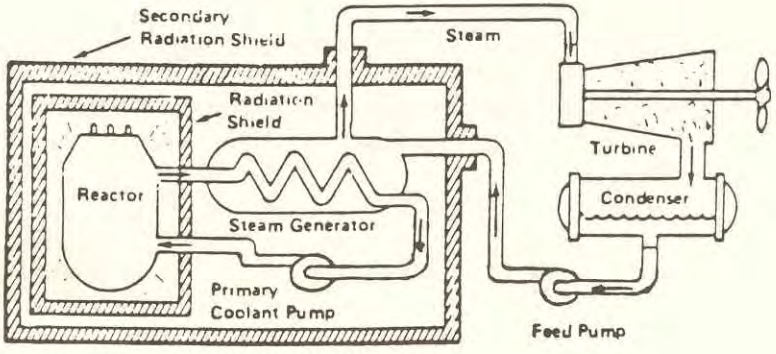
The propulsion plant of a nuclear powered ship is based upon use of a nuclear reactor to provide heat. The heat comes from the fissioning of nuclear fuel contained within the reactor. Since the fissioning process also produces radiation, shields are placed around the reactor so that the crew is protected.

The nuclear propulsion plant in this ship uses a pressurized water reactor design which has two basic systems; the primary system and secondary system. The primary system circulates ordinary water and consists of the reactor, piping loops, pumps and steam generators. The heat produced in the reactor is transferred to the water under high pressure so it does not boil. This water is pumped through the steam generators and back into the reactor for reheating.

In the steam generators, the heat from the water in the primary system is transferred to the secondary system to create steam. The secondary system is isolated from the primary system so that the water in the two systems does not mix.

In the secondary system, the steam flows from the steam generators to drive the turbine, and generators, which supply the ship with electricity, and to the main propulsion turbines, which drive the propeller. After passing through the turbines, the steam is condensed into water which is fed back to the steam generators by the feed pumps. Thus, both the primary and secondary systems are closed systems where water is recirculated and reused. There is no step in the generation of this power which requires the presence of air or oxygen. This allows the ship to operate completely independent from the earth's atmosphere for extended periods of time.

THE POWER PLANT



A DAY IN THE LIFE OF A SUBMARINER

John Radford is a fictitious name for a typical San Juan Submariner. He is, we will imagine, a Second Class Quartermaster. As such, he works in the Quartermaster Division in the Navigation Department. (In the Navy, Quartermasters are specialists in navigation.)

On a day that he has the 0600 to 1200 watch (6 a.m. to 12 a.m.), John is awakened at 0500 by a messenger; this gives him 45 minutes to dress, shave and enjoy a large breakfast. In keeping with a Navy tradition, he reports to his watch station in the Attack Center, where the Officer of the Deck also stands his watch, 15 minutes before his watch begins, in order to be briefed on the activities of the previous watchstander on his time: a custom most appreciated by the departing Quartermaster. During his six-hour watch, Quartermaster Radford plots the ship's position on the chart, assists the Officer of the Deck and maintains the ship's log.

After his relief has taken the watch, John cleans up for the noon meal. Today's meal is followed in the crew mess by a "School of the Boat" lecture given by the Auxiliary Division Chief Petty Officer on the ship's ventilation system. Since he is already qualified on the San Juan, John passes the lecture up in order to spend some time preparing for his First Class Quartermaster examination. At 1500 (3 p.m.), he has an appointment to examine a newly reported seaman on his knowledge of the ship's periscopes and antennas, for the seaman's submarine qualification. John's immediate supervisor, a Chief Quartermaster, had told him to make some changes to several navigation charts and publications and to prepare an order for some new training materials — which took the rest of the afternoon.

The ship's daily drill — which today was unannounced — interrupted the task for about thirty minutes. Drills are conducted to test the crew's reaction to casualty and combat situations of various sorts: fire, loss of power, toxic gas, depth charge, and so on. Every drill is an "all hands" effort — even those catching up on lost sleep are summoned by the ship's alarms. Fire hoses are unrolled, medical bags opened, gas masks worn, equipment operated. Nothing that can possibly be done to enhance the realism is neglected.

The movie after the evening meal was one he had seen before so John read some more of a novel he'd gotten in the ship's library. Then he can doze for a couple of hours before standing his next watch — the mid watch, from midnight until six in the morning.

The schedule of our mythical John Radford is not at all imaginary or exceptional — it is typical of what a submariner does during a usual workday at sea. It is perhaps a fair answer to the often posed question: what on earth do you do out there?

HOW A SUBMARINE IS ORGANIZED

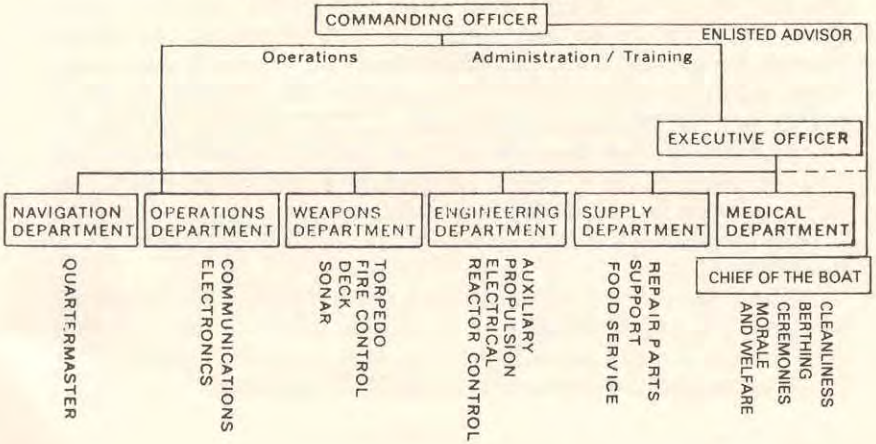
Few modern institutions can rival the nuclear submarine for complexity and absolute self-sufficiency. The often inhospitable environment of the vast sea only intensifies the need for coordination of each crewman's activities. The keystone of the submarine organization is the Commanding Officer — the Captain of the Ship. The responsibility of each operation of the submarine — in fact, the responsibility of each individual aboard — converge at the command level and create the Commanding Officer's ultimate charge: to successfully carry out the missions assigned. Whatever measures are required, in his judgement, to accomplish this task, the Commanding Officer is empowered to employ. It is this necessary conferral of discretion in an isolated circumstance that lends to the submarine command a sense of creativity and individuality.

Second in Command is the Executive Officer — always next senior in rank to the Captain and not very far from attaining his own command. The Exec, or XO as he is informally called, offers his wide ranging experience to the submarine organization through direct coordination of the administrative and training activities of the ship. His knowledge and position extend his responsibilities and interests to every aspect of submarining.

The Chief of the Boat is the principal enlisted advisor to the Commanding Officer. He keeps the command aware of existing or potential situations, procedures, and practices which affect the welfare, moral, job satisfaction and utilization of its enlisted members.

The remainder of the ship's force is composed of six departments: Navigation, Operations, Weapons, Engineering, Supply and Medical. The first four are ordinarily led by the more senior officers of the ship who rank just below the Executive Officer. The more junior officers are assigned within these departments to act as Division Officers. Divisions are the smallest organizational units aboard, and consist of groups of enlisted specialists organized according to skills.

ADMINISTRATIVE ORGANIZATION



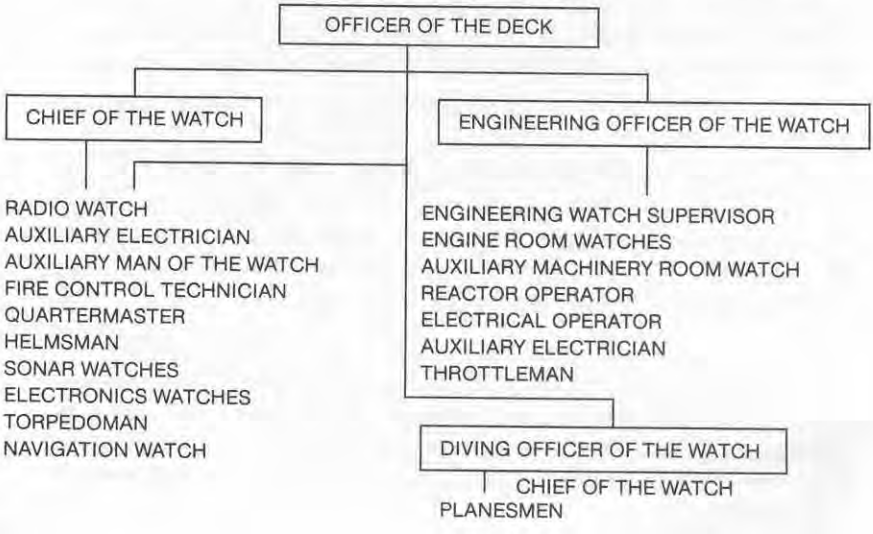
Every piece of material on the ship from the propeller to the paint job is assigned to a Division and finally to an individual technician for its care. Each of these men soon becomes an expert not only in the technical functions to which his special training has been directed, but also in the demands of administration, leadership and instruction of his shipmates.

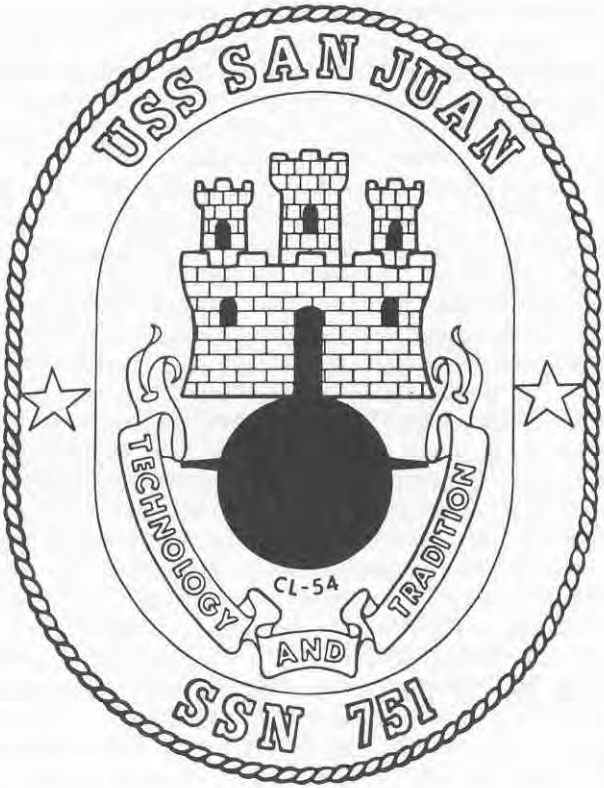
There is a second organization aboard the ship: The Watch. Whereas the first organization is designed to maintain equipment, train and administer to the various groups of men, the Watch organization is designed to conduct and coordinate the actual operations of the ship around the clock. This organization is ordinarily divided into three similar groups called Sections. At any given time on the submarine one of these Sections "has the Watch." Each Watch Section is headed by the Officer of the Deck who carries out the Commanding Officer's orders during the hours of his watch. It is the Officer of the Deck who orders ship's course, speed and depth, and conducts all combined shipboard evolutions. He is assisted by Second Officer, the Engineering Officer of the Watch, who controls the reactor plant and all engineering evolutions in the propulsion plant.

Each Watch Section consists, for example, of Helmsmen, who steer the ship; Throttlemen, to control the steam turbine engines; Sonar Operators, who silently probe the ocean's environs; Reactor Operators, who control the ship's remarkable energy source; Torpedomen, to service and launch San Juan's Weapons; Radio Operators, who maintain an invisible link with Command Centers ashore; and Electricians, who supply power from the reactor for virtually every service on the ship. These Watchstanders, among others, stand alertly by their equipment and stations throughout the duration of each Watch.

The tempo of the Watch is the heartbeat of the ship — and, since one third of a submariner's time is spent standing his watch, it is also the principle determinant of his day to day routine.

WATCH ORGANIZATION





USS San Juan (SSN 751) ship's insignia contains a rendering of a castle bathed in gold. This is symbolic of the massive walls of the El Morro Fortress which guards the city and harbor of San Juan. The cross sectional view of a submarine is symbolic of the improved 688 class submarine with her bow planes extended. Below the submarine is CL-54, the hull number of the last ship to carry the proud name of USS San Juan.

The banner is enscrolled with the motto "Technology and Tradition" which represents the "Tradition" the San Juan inherits from the great city of San Juan and from both of the naval ships who previously carried the name San Juan. "Technology" is symbolic of the state of the art systems, such as the AN/BSY-1 Combat System and the retractable bow planes which USS San Juan (SSN 751) takes to sea.

The blue, oval shaped border, edged with gold rope represents the sea and excellence. The two silver stars refer to the previous ships of the same name and refer to San Juan as the second oldest city in the Americas. The colors red, white, and blue are from the national flag and that of the commonwealth of Puerto Rico.

HISTORY OF SHIPS NAMED SAN JUAN

The first San Juan (SP-1352) was built in 1904 by J.F. Duthie of Seattle, Washington and acquired by the Navy on 20 December 1917 on charter from the San Juan Packing Company of Seattle. She was converted for use as a minesweeper and patrol boat and Commissioned on 8 March 1918 under the command of Ensign R.W. Jackson, USNRF. Following Commissioning, San Juan was retained in the 13th Naval District and throughout her brief career, operated primarily in the Puget Sound-Juan de Fuca Strait area. After the end of World War I, her services were no longer required and in February 1919, she was decommissioned and returned to her owner.

The second San Juan (CL-54) was laid down on 15 May 1940 by the Bethlehem Steel Company of Quincy, MA. She was launched on 6 September 1941 and Commissioned on 28 February 1942 with Captain James E. Maher in Command. After shakedown in the Atlantic, San Juan departed from Hampton Roads, VA, on 5 June 1942 as part of a Carrier Task Group formed around Wasp (CV-9) and bound for the Pacific. During World War II, she participated in several of the great naval campaigns in the Pacific theatre.

San Juan participated in the landings at Tulagi, the battle of Savo Island, the battle of Santa Cruz, the neutralization of airfields at Bougainville and Rabaul, and the battle of the Philippine Sea. During the battle of Santa Cruz, San Juan withstood a direct hit to her stern by Japanese aircraft which resulted in damage to her rudder and the flooding of several compartments. San Juan helped guard her Group during the battle of the Philippine Sea when American Naval air power decisively defeated a Japanese counterattack to save the Marianas and in doing so, all but wiped out Japanese naval air strength.

San Juan was at sea when the news of a Japanese capitulation was received on 15 August 1945. On 27 August she anchored outside of Tokyo Bay. San Juan was the first Allied warship sighted by Tokyo's citizens. On 29 August, San Juan entered Tokyo Bay and landed parties which liberated prisoners in camps at Omori, Ofunda and Shanagawa Hospital. After evacuating camps in the Tokyo Bay area, San Juan moved to other areas in Japan where she continued to lead the liberation of allied prisoners.

She sailed for the United States on 14 November 1945. San Juan arrived at Bremerton, WA for inactivation on 24 January 1946 and was decommissioned on 9 November 1946. For her Pacific service, San Juan received 13 Battle Stars.

Technology has dramatically changed the size and capability of Naval warships since the original San Juan served her country in World War I, but the mission of the USS San Juan (SSN 751) has not significantly changed. That mission is to protect the interests of the United States of America.

THE CITY OF SAN JUAN

San Juan, the Capital City of Puerto Rico, blends centuries old traditions with the vibrancy of the present.

Ancient city walls, winding cobblestone streets and charming colonial buildings of "old" San Juan lie just minutes away on modern expressways from steel and glass skyscrapers and shopping malls.

Christopher Columbus first sighted the Island of Puerto Rico, the smallest and easternmost island of the Greater Antilles, nearly 500 years ago — on March 19, 1493. One of his shipmates, Juan Ponce de Leon, liked what he saw so much that he returned in 1508.

The district called Old San Juan was the personal vision of Ponce de Leon. He helped plot the layout of the city, supervised the construction of its massive walls, and determined which structures were to be built and where. Today, 500 years later, visitors and residents alike still marvel at the beauty and charm of his city, the oldest city under the American Flag. (Puerto Rico occupies unique status as a Commonwealth of the United States. It has its own Constitution and a system of government very similar to that of most states.)

Declared a historic zone in 1949, Old San Juan was renovated. Tourists now enjoy El Morro, a six-level fortress built in 1540 and towering 140 feet above the sea. Other attractions include the city walls built in 1630 to protect the city from foreign invaders, a cemetery noted for its elaborate tombstones and former convent that houses the Institute of Puerto Rico as well as a folk arts center.

Next door, the Plaza de San Jose boasts a bronze statue of Ponce de Leon forged from a British cannon melted down after an unsuccessful attempt to conquer the island. The Plaza also houses a museum displaying memorabilia of Puerto Rico's greatest musician, Pablo Casals. Nearby is the San Juan Museum of Art and History. Originally a marketplace, it was restored in 1979 and today houses collection of Puerto Rican art. Spacious galleries and an enormous central patio for concerts and special events make this museum a central part of the island's cultural life.

Beyond the time-worn battlements of the historic section lies a vibrantly new city equally suited to the tourist industry. It houses over a million people, one third of the island's population.

Much of the activity centers around an area known as Condado, where many luxury hotels and gambling casinos line some of the most spectacular beaches in the Caribbean. Shops, restaurants and entertainment add the necessary spice to this tropically flavored capital where the average annual temperature is 77 degrees.

The Centro de Bellas Artes, San Juan's new five arts center and just minutes away from the hotel area offers symphony, song festivals, jazz, ballet and theater.

DOLPHINS

Many people are interested in the history and development of Navy traditions. One Navy tradition involves the wearing of Dolphins by qualified submariners. "Earning Dolphins" is a significant event in a Navy submariner's career — one of those special high points that instill tremendous personal pride and a sense of accomplishment.

Dolphins are earned through a process of "Qualifying." Individuals must learn the location of equipment, operation of systems, damage control procedures and have a general knowledge of operational characteristics of their boat. Dolphin wearers qualify initially on one boat and must requalify on boats to which they are subsequently assigned.

Once Dolphins have been earned, they are awarded by the Commanding Officer in a special ceremony.

The origin of the U.S. Navy's Submarine Service Insignia dates back to 1923. On 13 June of that year, Captain Ernest J. King, USN, later to become Fleet Admiral and Chief of Naval Operations during World War II, and at that time Commander Submarine Division Three, suggested to the Secretary of the Navy, via the old Bureau of Navigation, that a distinguishing device for qualified submariners be adopted.

A Philadelphia firm, which had done work for the Navy previously, was approached with the request that it undertake the design of a suitable badge. Two designs were submitted by the firm and these were combined into a single design. It was the design in use today. A bow view of a submarine, proceeding on the surface, with bow planes rigged for diving, flanked by Dolphins in horizontal positions with their heads resting on the upper edge of the bow planes.

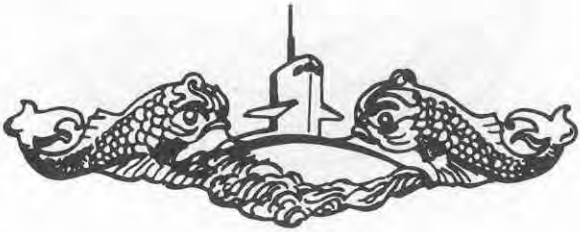
The Officer's Insignia was and is a gold plated metal pin, worn centered above the left breast pocket and above the ribbons or medals. Enlisted men wore the insignia, embroidered in silk, in white on blue for blue clothing, and in blue on white for white clothing. This was sewn on the outside of the right sleeve, midway between the wrist and elbow. The device was two and three-quarters inches long. In mid-1947 the embroidered device shifted from the sleeve of the enlisted men's jumper to above the left breast pocket. Subsequently, silver metal Dolphins were approved for enlisted men.

In more recent time, Dolphins for specialist officers in the submarine force have been developed. These include the Engineering Duty Officer Dolphins, Medical Officer Dolphins, and Supply Corps Dolphins. Regardless of the color of the pin or the insignia at the center, Dolphins are worn with pride by members of the Submarine Force.

A SUBMARINER'S PRAYER

"Eternal Father, strong to save,
Whose arm hath bound the restless wave,
Who biddest the mighty ocean deep
Its own appointed limits keep.
O hear us when we cry to Thee
For those in peril on the sea.

Bless those who serve beneath the deep,
Through lonely hour their vigil keep.
May peace their mission ever be.
Protect each one we ask of Thee.
Bless those at home who wait and pray.
For their return by night or day."

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SUBMARINE DEVELOPMENT SQUADRON
SCIENCE TECHNOLOGY TACTICS