

WELCOME



ABOARD

UNITED STATES SHIP DRUM

(SSN 677)

BUILT BY
MARE ISLAND NAVAL SHIPYARD

Keel laid	20 August 1968
Launched	23 May 1970
Commissioned	15 April 1972
Length	292 feet
Beam	32 feet
Displacement (surfaced)	4060 tons
Speed	Over 20 knots
Depth	Deeper than 400 feet

Sponsored by
Mrs. W. F. Bringle



UNITED STATES SHIP DRUM

WELCOME ABOARD

On behalf of the officers and crew, I take pleasure 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, Drum is neither spacious nor designed for large numbers of people. We ask that you bear with us in this respect since we share your inconvenience. This pamphlet has been prepared as a memento of your visit. It also provides information necessary to ensure your health and comfort while aboard.

As your hosts, all of us in Drum hope your visit will be informative, interesting, and pleasant.

COMMANDING OFFICER
USS DRUM (SSN 677)

GENERAL INFORMATION

Members of the ship's company are stationed on watch in every compartment. See them for assistance in any matter. Under no circumstances should a visitor attempt to operate any equipment, turn any knobs, twist any dials, flip any switches, or turn any valves. Please observe all warning signs which may be posted.

EMERGENCIES

In the event of an emergency, the nature and location of the emergency will be announced over the loudspeaker system and an alarm will be sounded. In such an event you are requested to stand fast but clear of all passageways and watertight doors. The crewman in charge of the compartment will direct your movements and explain the situation and action to you as soon as he is able to do so. If you are requested to clear an area, please do so expeditiously and quietly. Smoking is prohibited during emergencies.

Should you see water leaking, smell smoke, or have any question concerning the safety of the ship, please call it to the attention of a member of the ship's force who will take proper action.

MEDICAL FACILITIES

The Medical Department Representative, a hospital corpsman, is available at all times. In the event of any injury or illness that may occur while you are on board, please consult the corpsman immediately.

It is recommended that persons susceptible to motion sickness obtain medication prior to getting underway. However, medication for this purpose is always available.

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 your 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 ship's force 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. It may foul the seat of the sanitary tank overboard discharge.

Showers may be taken any time 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.

Messing arrangements will be established prior to your arrival and you will be assigned a specific area and time to eat. All meals must be served in shifts, so you are requested to be punctual in your arrival for meals and not to linger over coffee after finishing.

Smoking is permitted throughout the ship except in bunks, bilge areas, or the vicinity of pyrotechnics or oxygen bleeding stations located in the Bow Compartment and Engine Rooms.

ORDERS

If you are under military orders, please turn your orders in to the yeoman in the Ship's Office (Operations Compartment, First Platform, in the passageway). The orders will be endorsed and ready for pickup at the end of your visit.

RADIOLOGICAL CONTROLS

Radiation Warning Signs and Markers consisting of magenta and yellow signs, markers and tape or ribbons, must be observed. Only authorized persons are allowed in areas marked "RADIATION AREAS" and no loitering in such areas is allowed. Entrance into areas marked "HIGH RADIATION AREA" or "RADIOACTIVE CONTAMINATION" is prohibited unless approved by the Commanding Officer and supervised by the ship's force Radiological Control personnel.

Film Badges must be worn by all persons embarked. These badges are issued on arrival to all persons not already possessing one. It is anticipated that visitors will receive no detectable radiation. Should detectable radiation be received, appropriate reports will be made. These film badges must be worn at all times except when sleeping. They are to be worn external to all clothing, on the front of the body between the waist and the shoulder. Loss of a film badge should be reported to the Medical Department Representative as soon as noted. All film badges will be collected by the Medical Department Representative prior to visitor debarkation.

SECURITY

Most features of Drum are of a classified nature. The Radio Room, the Sonar Spaces, and the Propulsion Plant Spaces are security areas into which access may be granted only to authorized persons. Information concerning the speed, depth, weapons, fire control, and reactor plant equipment and operations are classified. In the event that one of your questions to a member of the ship's company is not answered, please do not be offended. Personnel must be assured of your clearance and "need to know" to divulge such information. In case of doubt you will be referred to the appropriate ship's officer.

CALLS

For embarked visitors, calls are made by the Duty Steward in Wardroom Country, the Torpedo Room Watch on the Third Platform Operations Compartment, or the Messenger of the Watch from the Control Room. Any of these watchstanders will ensure a visitor is called at any particular time he may designate.

ACCESS AND CONGESTION

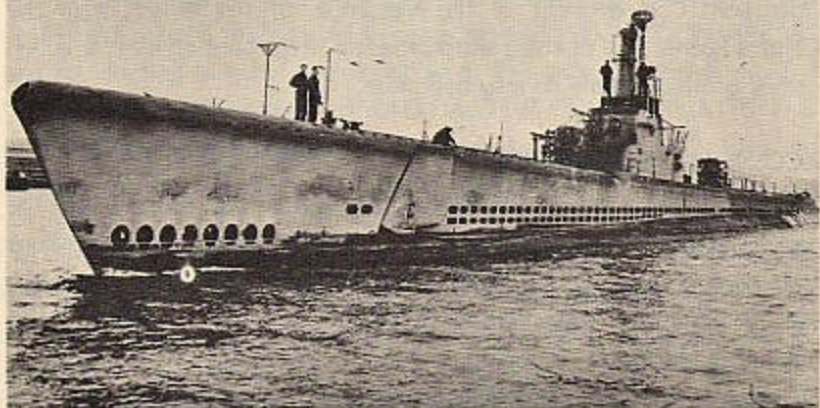
Visitors are always welcome in any authorized space when the operations of the ship permit. At most operating and control stations the space is very limited. As a result, it is necessary for any person not on watch to have permission of proper authority before being allowed in the space. This regulation 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.)

Maneuvering Room — Engineering Officer of the Watch

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 the necessary permission for visitors to go on the bridge.



USS DRUM (SS 228)

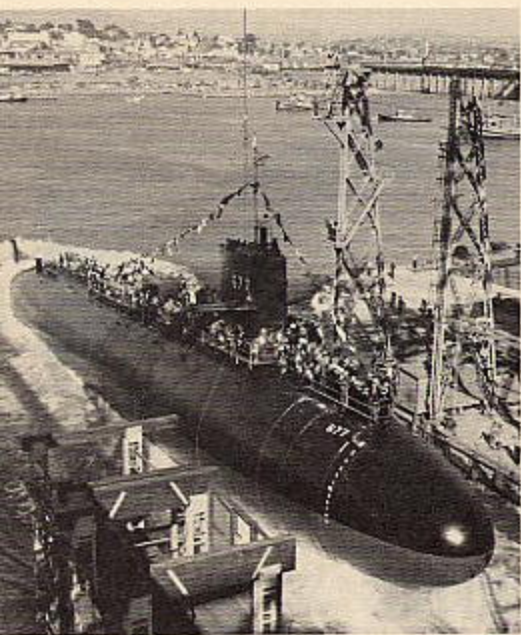
The first Drum (SS 228), built by Portsmouth Navy Yard, Portsmouth New Hampshire, was launched on 12 May 1941, with Mrs. Thomas Holcomb as sponsor. Commissioned on 1 November 1941, she was commanded by Lieutenant Commander Robert H. Rice.

Following shakedown, she transited to Pearl Harbor and departed on her first war patrol on 17 April 1942. Operating off the coast of Japan, Drum sank four enemy ships on this first patrol. On subsequent patrols Drum continued this impressive record and at the end of the war had sunk fifteen enemy ships in thirteen patrols.

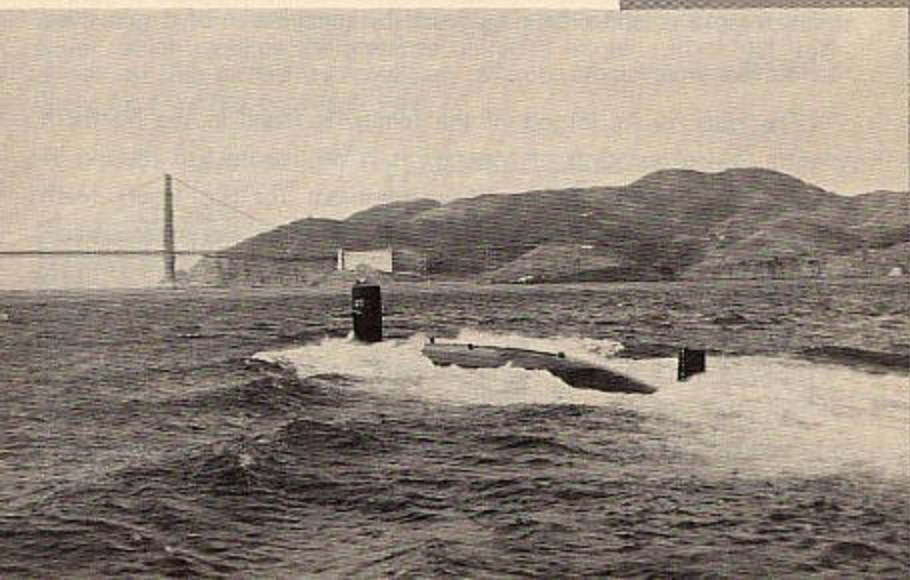
Drum's total of 80,580 tons of shipping sunk ranks her eighth in total tonnage destroyed. For actions in World War II USS Drum (SS 228) was awarded twelve battle stars.

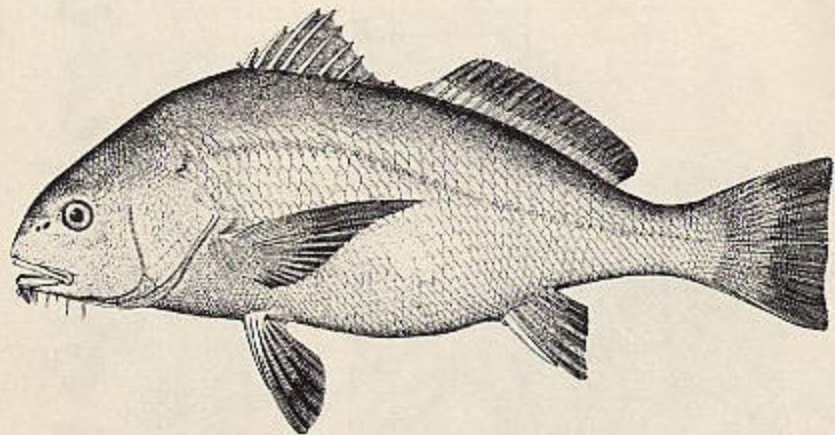
Decommissioned in 1946, Drum served as a reserve training ship from 1947 until 1958. The ship is now enshrined alongside the battleship Alabama in Memorial Park in Mobile, Alabama.

Drum (SS 228) had an overall length of 311 feet, 8 inches; a displacement of 1526 tons and carried a crew of 6 officers and 54 men. Her armament included ten torpedo tubes, one 3 inch .50 caliber gun and two .30 caliber machine guns.



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DRUMFISH

The Drumfish belongs to the family of fish called Sciaenidae, most of which make a loud drumming sound by compression of a gas filled air bladder.

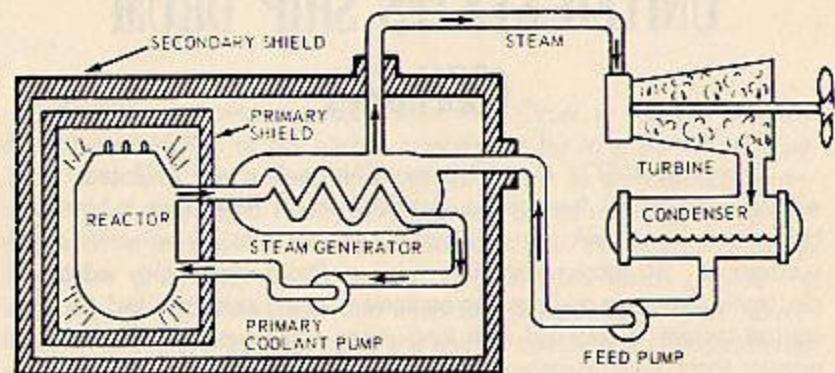
The black drum, largest of the family, is found in the Northern Atlantic Ocean and Gulf of Mexico. It is an inshore fish feeding in schools on the ocean bottom. Powerful throat (or pharyngeal) teeth allow it to easily crush the shells of oysters, clams and other bottom dwellers.

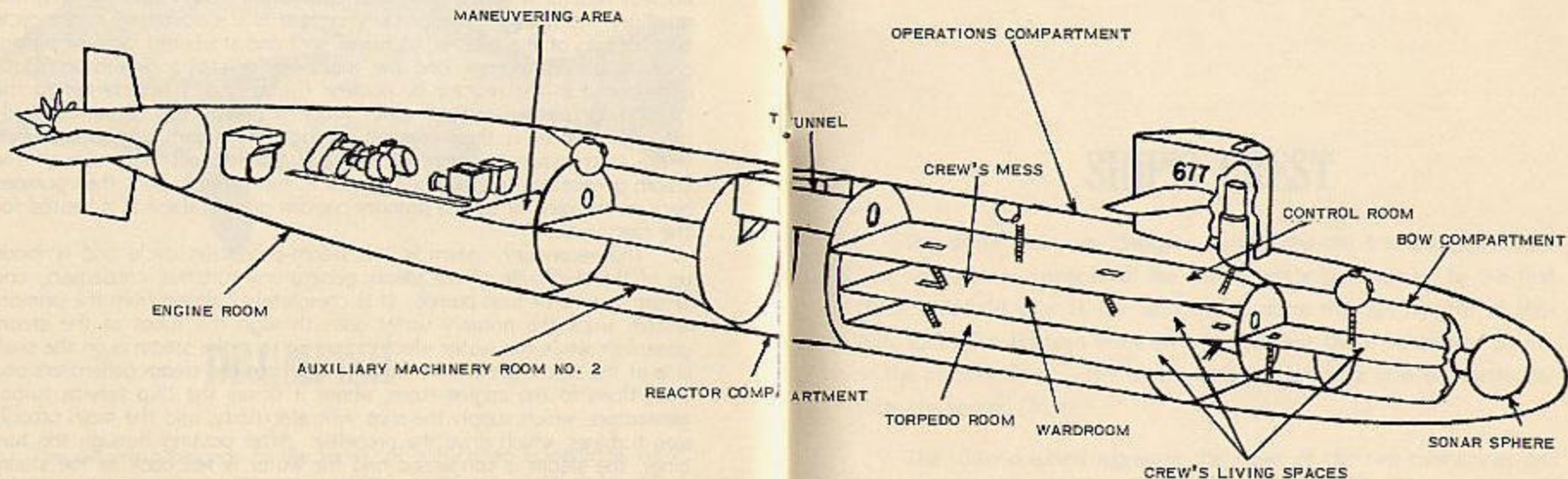
The adult drum is silvery in color with a brassy lustre. The fins are dusky or black and the young are distinguished by four or five vertical black bars on the sides. The average drumfish weighs twenty to forty pounds but some may reach a length of over four feet and weigh as much as one hundred and forty pounds. It is valuable as both a game and commercial fish.

THE POWER PLANT

Drum is powered by a nuclear power plant which consists of a nuclear reactor with its associated circulating water, steam cycles, and auxiliary machinery. The primary system is a circulating water cycle and consists of the reactor, identical port and starboard loops of piping, primary coolant pumps, and the tubes of the steam generators. Heat is produced in the reactor by nuclear fission and is transferred to the circulating primary coolant water which is pressurized to prevent boiling. This water is then pumped through the steam generator tubes, where it transfers its heat to the shell, or the secondary side of the steam generators, where it boils water to form steam. It is then pumped back to the reactor by the primary coolant pumps where it is heated for the next cycle.

The secondary system is the steam-producing cycle and is made up of the shell side of the steam generators, turbines, condensers, and steam generator feed pumps. It is completely isolated from the primary system since the primary water goes through the tubes of the steam generator while the water which is boiling to make steam is on the shell side of the steam generator. Steam rises from the steam generators and then flows to the engine room, where it drives the ship service turbo-generators, which supply the ship with electricity, and the main propulsion turbines, which drive the propeller. After passing through the turbines, the steam is condensed and the water is fed back to the steam generators by the feed pumps. There is no step in the generation of this power, which requires the presence of air or oxygen. This fact alone allows the ship to operate completely divorced from the earth's atmosphere for extended periods of time.





UNITED STATES SHIP DRUM (SSN 677)

Drum (SSN 677) is a Sturgeon Class submarine, 292 feet long, with a beam of 32 feet and a displacement of 4800 tons submerged. Her mission is to seek out and destroy enemy ships — primarily other submarines. To accomplish this mission Drum has highly advanced electronic detection and ranging equipment and a computerized weapons control system. Combined with long range torpedoes and the SUBROC missile, these systems permit detection and destruction of enemy ships and submarines at great distances.

As are all nuclear powered submarines, Drum is capable of operating independently of the earth's atmosphere for long periods of time. This characteristic is a result of power generation by a pressurized water reactor and associated steam plant which requires no oxygen supply or atmospheric exhaust. The power generated by the reactor provides propulsion and drives auxiliary turbine generators which provide the ship with all necessary light and electrical power. To support human life in this enclosed environment, the ship is completely air-conditioned and the atmosphere is highly controlled to prevent buildup of any toxic substances hazardous to life or equipment.

SHIP'S CREST

The ship's crest was designed to join the old and the new Drum. The twelve stars, symbolic of the twelve battle stars earned by the first Drum in World War II, are arranged to form the hull number of that ship, 228. The thirteen white stripes represent the thirteen war patrols of the original Drum. The black nuclear submarine hull silhouette depicts the second Drum.

The silver dolphins represent the crews of the two submarines and the gold border and letters the officers.

The motto "UNBEATABLE" is a paraphrase of the slogan frequently used by the crew of the first Drum, "The Drum can't be beat".