

Smaller Submarines & Submersibles



U.S. SUBMARINES, INC.

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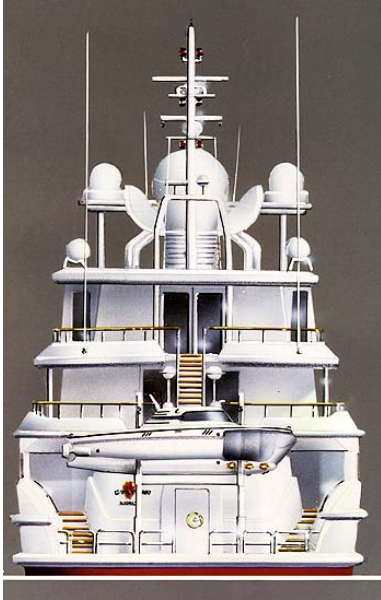
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excitement

Dive to 300 meters



In 1994 we designed the 4-passenger *Discovery 1000* specifically to be launched and recovered from a 72 meter yacht. The launch and recovery system was engineered by Caley Ocean Systems. When desirable, both the submarine and the launch and recovery system could be removed from the yacht and placed in a 40 foot container for shipping.

Small Submarines for Large Yachts

No longer is the turbine powered helicopter the ultimate accoutrement for a megayacht. U.S. Submarines, Inc. offers you three different undersea vehicles designed to transport you and your guests on remarkable subsea journeys to depths of up to 300 meters – all in perfect comfort and safety.

Each of these three submarines were designed specifically to be launched and recovered from a large yacht. And, each vehicle is designed and built to the rigorous A1 Manned Submersible classification standards of the American Bureau of Shipping.

Notably, each year over 1 million passengers dive aboard ABS classed manned submersibles and tourist submarines – and the industry has a perfect safety record. So, whether you choose the incredibly sophisticated *Discovery 1000*, or the small and elegant *Triton 1000*, you can rest assured that you will be experiencing one of the safest forms of transportation known to man.

Expect Fascination

One of our unique luxury submarines is a passport to a new frontier. As an owner, you and your guests can journey to the silent depths of the sea and explore uncharted territory, or



you can easily experience the fabulous abundance and diversity of life on a tropical coral reef.

With your submarine based aboard your yacht you will have the extraordinary opportunity to explore a myriad of subsea environments as you cruise and we have a special program to advise you as to where to go for the ultimate subsea experiences.

The unbelievable profusion of lovely soft corals in the South China Sea and Indian Ocean. The splendid and dazzling profusion of reef fish in the South Pacific. The playful mammals of the wonderfully diverse Galapagos Islands. The crystal clear waters and mysterious shipwrecks of the Caribbean. The wonders of the subsea world are truly yours to experience.

Expect Luxury

All of our submarines have air conditioned one-atmosphere interiors, so regardless of how deep you dive you'll enjoy shirt-sleeve comfort at surface pressure. Rich leather seating and an excellent stereo system add to the luxury ambiance.



discovery

Advanced technology



The Discovery 1000

The *Discovery 1000* is quite simply the world's most advanced and sophisticated small submarine. The unique transparent acrylic passenger compartment provides unsurpassed viewing and a wonderful feeling of spaciousness.

Discovery's optional diesel engine makes the submarine truly autonomous and able to recharge its high pressure air tanks and battery bank while surfaced. The diesel also allows for extended surface range and higher surface cruising speeds.

Discovery also boasts digital proportional joystick controls and an advanced computer based monitoring system that improves safety and reduces pilot workload.

The interior of the *Discovery* is replete with luxury and warmth. A complete climate control system keeps the cabin comfortable under all conditions, and overstuffed leather seating assures a comfortable ride. When submerged, *Discovery's* battery powered electric thruster system is so quiet, it can barely be heard. You're sure to enjoy gliding smoothly through the ocean's tranquil depths.



Discovery's passenger compartment is composed of transparent acrylic which has a refractive index that closely approximates that of seawater. The result is that the sides of the submarine virtually disappear, creating the illusion of full immersion and the most spectacular viewing imaginable.

When cruising on the surface, *Discovery* has a deck cockpit that provides comfortable seating for the passengers. Excellent surface stability, streamlined hydrodynamics and levels of safety consistent with ABS classification also characterize this design.

Modular Design

The *Discovery* is available in 2-, 4-, 6-, 8-passenger configurations. Each two-seat addition is effected by adding a cylindrical section of acrylic. The 2- and 4-passenger versions are suitable for launch and recovery from large yachts, while the larger configurations are better based from a marina or private dock.

Construction Time & Crew Training

The construction time for a *Discovery* is approximately 18 months. Full crew training and technical support is available.

Specifications:

Operating Depth 305 m
Passengers 4
Length 8.40 m
Beam 1.65 m
Height 2.20 m
Draft 1.35 m
Weight 7.0 tons
Max. Speed 6 knots
Submerged Range 50 nm
Max. Mission Time 28 hrs
Life Support 96 hrs



Compact & lightweight



Triton 1000

The *Triton 1000* is U.S. Submarines latest design and represents an advanced, light weight minimum volume 2 or 3-person configuration engineered specifically for deployment from megayachts. With an overall height of 1.8 meters and an overall length of only 3.8 meters the *Triton* will fit on many mid-level boat decks, and at 3.3 tons it can often be launched with the existing davit systems.

The *Triton* can also be trailered behind a truck or SUV or shipped in a standard container.

The *Triton* design provides for excellent visibility and high levels of comfort with luxury leather seating and full air conditioning.

Stability & Freeboard

Vehicles built by U.S. Submarines are unique in that they are the only small submersibles available that have excellent



surface stability and also meet the ABS freeboard requirement of .77 meters between the water's surface and the hatch. These factors are critical in the enjoyment of a leisure submersible. Other commercial manufacturers build vehicles where the passengers or scientists must embark and disembark while on the deck of the support ship. The occupants cannot safely exit the submarine while it is surfaced. This reduces operating flexibility and requires an expensive man-rated launch and recovery system.

Learning to Be a Pilot

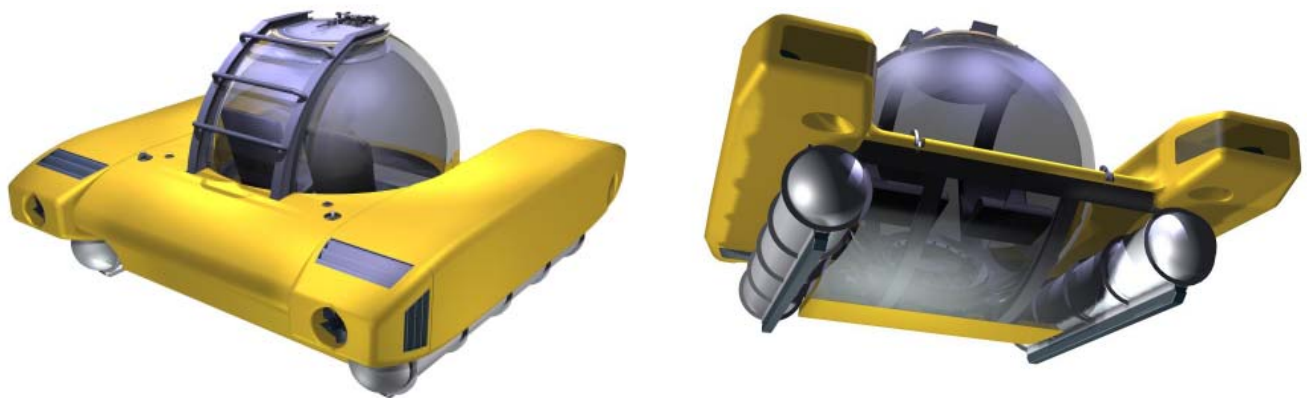
We provide piloting and maintenance training to the owner or crew at no additional cost.

Triton has been designed to be easy to pilot, with intuitive joystick controls and a computer based monitoring system. The thrill of piloting your own deep submersible is a rare and rewarding experience.

Maintenance of *Triton* is not complex. And, *Triton* is very reliable as we only use components proven effective in subsea applications.

Specifications:

Operating Depth	305 m
Passengers	2
Length	3.00 m
Beam	3.00 m
Height	1.90 m
Draft	0.80 m
Weight	3.3 tons
Max. Speed	3 knots
Submerged Range	12 nm
Max. Mission Time	6 hrs
Life Support	80 hrs



technical

Things to know



Here a tourist submarine is shown cruising the depths along a coral reef. Over 40 such submarines have been built, most of them with a passenger capacity of 48. The tourist submarine industry carries nearly 2,000,000 passengers a year and has a perfect safety record.

ABS Classification: Safety is First

Contemporary manned submersibles and tourist submarines have a perfect safety record and are statistically the safest form of transportation in the world today. This is due in large part to the rigorous classification requirements of the American Bureau of Shipping and other classification societies.

The requirements for ⚙️A1 Manned Submersible classification are significant. The process begins with a thorough review of the submarine's design and its engineering calculations. Typically, several hundred design drawings will be submitted to ABS for review and approval. Subsequently, all materials and components used in the vehicle must be approved as well. Once the basic design is approved, ABS surveyors test and certify pressure hull materials on site, and then continue the testing and inspection process of all major systems throughout construction.

The certification process culminates in shop trials and then extensive sea trials. Once approved, the submarine is awarded its classification certificate. Each year, the submarine must be thoroughly inspected by an ABS surveyor in order to maintain classification.

Classification is a requirement for insurance and provides you, the owner, with the assurance that your submarine has been built to stringent safety requirements. In addition, ABS classification is accepted by all regulatory authorities worldwide. All U.S. Submarines' vehicles are classed to ABS, and the company's President, L. Bruce Jones, is an appointed member to the ABS Special Committee on Undersea Vehicles. In our opinion, under no circumstances should you consider involvement with any submarine or submersible that is not built to classification society requirements.

Launch & Recovery

If you choose to purchase a submersible and use it aboard your yacht you will have to address the issue of launching and recovering the submarine or submersible. This may require special equipment.

There is no such thing as a lightweight one-atmosphere submersible. The vehicles must

weigh at least as much as the water they displace, so even a 2-person submersible will weigh 3 tons.

Issues to consider include the additional weight of entrained water in the fairings of the submersible, snatch loads, heave compensation and maximum allowable sea states for recovery.

If the yacht's existing davit system is not sufficiently capable it is usually possible to retrofit the existing equipment or to install a similar low impact system. Larger, stand-alone systems can be made removable. We work closely with the world leader in launch and recovery equipment, Caley Ocean Systems.



u.s. subs

Experience counts



The wreck of the Kirk Pride is shown here perched along a ledge on the famed Cayman Wall at a depth of 240 meters. The photo was taken with natural light. If you ask the question, "What is there to see below 100 meters?" This is an example.

The Nomad 1000 is the world's first truly autonomous diesel electric personal luxury submarine and has 1000 nautical mile surface range and a 305 meter diving depth.

U.S. Submarines, Inc.

At U.S. Submarines we developed designs for the world's first luxury submarines back in 1993. We are the only company in the world today with a luxury submarine program and one of only five firms world-wide active in the design, engineering and construction of manned submersibles and tourist submarines.

The management team at U.S. Submarines has been involved in the design, engineering, construction or operations of over 60 submarines or submersibles, amounting to approximately 40% of all operating tourist submarines and manned submersibles. We also consult with well known engineers, naval architects and operations specialists, making our group the most experienced and capable civil submarine experts in the world today.



Design Philosophy

As designers and builders we believe in innovative adaptation of existing technology. But as submarine operators we never put a component in one of our submarines that has not been demonstrated to be effective in the subsea environment. Reliability and maintainability are critical issues to us. Our products are fully warranted and we provide initial operations and maintenance training as well as full on-going technical support.

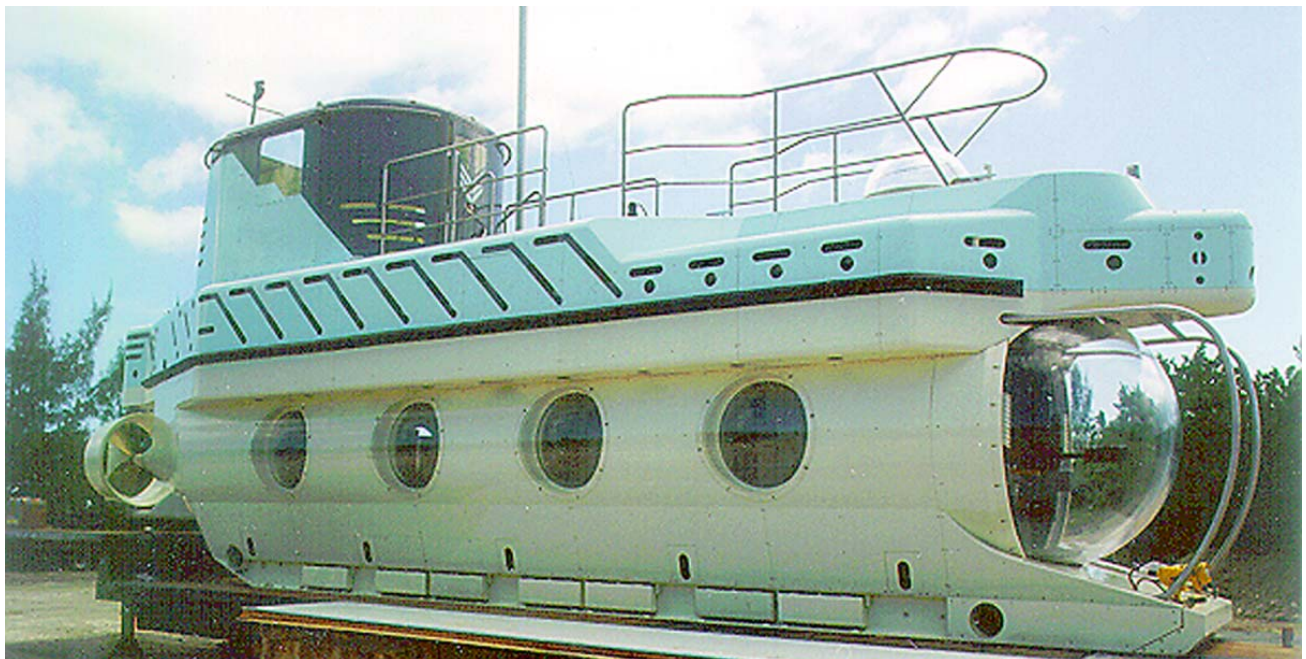
Other Submarines

In addition to the small submarines and submersibles described herein, U.S. Submarines also offers three larger vehicles and we can custom build to your requirements.

The *Nomad 1000* (facing page below) is a 20 meter long diesel electric personal luxury submarine with 1000 nautical mile range and a 305 meter diving depth. The *Nomad* can sleep six in an executive jet-sized interior.

The larger *Seattle 1000* (following page) is 36 meters in length and has five staterooms. Powered by twin diesels *Seattle* has trans-Atlantic range at 14 knots and is basically a submarine equivalent to a contemporary megayacht. *Seattle* is capable of remaining submerged for several days, and has viewports that are 1.8 meters in diameter.

“Any yacht can cruise the ocean, but only *Seattle* can explore it’s depths.” The first *Seattle* awaits an owner.



u.s. subs

Personal luxury submarines



Passenger compartments composed of transparent acrylic provide exceptional viewing and characterize several U.S. Submarines' designs.

The *Seattle 1000* was designed as a megayacht equivalent. The upper portion of the photo to the right is a profile view while the section beneath represents a cutaway profile of the pressure hull. Next is the upper deck plan view, followed by a plan view of the lower deck. A diver lock out chamber is optional on this remarkable luxury submarine.

The *Phoenix 1000* (not shown) is a 65 meter luxury submarine with 470 square meters of interior space. With a 305 meter diving depth, four decks, transatlantic range and a deep diving docking mini-sub it is the

ultimate personal transportation device for the new millennium.

For more information please contact us by telephone, facsimile or e-mail. And please visit our award winning website at <http://ussubs.com>



