Bluefin ...rugged and reliable

The Office of Naval Research (ONR) has long been interested in the development of autonomous underwater vehicles (AUVs). AUVs can be used to conduct coastal surveys in support of science or function as underwater mine reconnaissance devices for the Navy's mine countermeasure program. Bluefin Robotics Corporation based in Cambridge, MA, has developed two AUVs, Bluefin-21 and Bluefin-12, with funding from ONR.
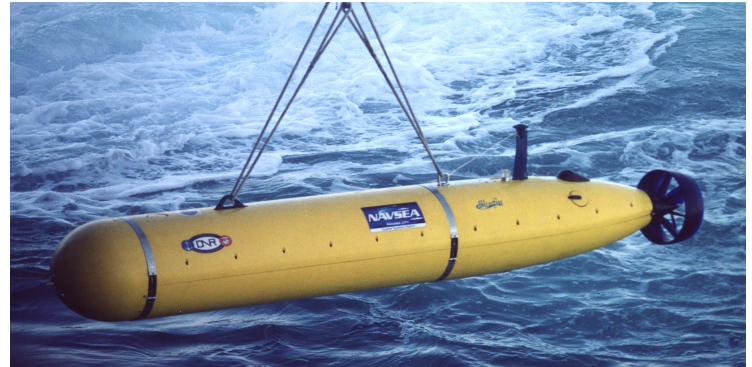

Photo of Bluefin-21 being lowered into the water.

Bluefin-21or Battle-space Preparation Autonomous Underwater Vehicle (BPAUV) is the larger of the two AUVs at almost 11 feet in length and 21 inches in diameter. Equipped with user-friendly software and a graphical user interface designed with a "drag and drop" format, it is easy to operate. Once the area to be mapped has been defined, the BPAUV does the rest. Collecting the data autonomously, the BPAUV is designed to provide the most accurate high-resolution bottom classification and oceanographic data as well as mine location information. It can operate day or night in various weather conditions.

Traveling at speeds of 3-5 knots, the BPAUV can cover 1.2 million square yards per hour at a depth of 660 feet. It has dual power capabilities using rechargeable batteries or a fuel cell for power. The BPAUV has a range of 40 nautical miles when using rechargeable batteries and a range of 400 nautical miles when using a fuel cell. Using 2-dimensional sidescan sonar, it can pinpoint mine locations to within 3 feet.

Providing naval officers with superior situational awareness, the BPAUV's long-range Mine Counter Measure capabilities are designed to be an integral and organic part of naval forces. It supplies the mission planners with accurate, real-time data for use in the early stages of battle-space preparation. The BPAUV performs this mission while simultaneously minimizing the risk to the Navy's most valuable asset – its Sailors.

Bluefin-21 Specifications

Dimensions:
Length: 10 ft. 8 in.
Diameter: 21 in.
Weight: 726 lbs.

Performance:
Speed: 3-5 knots
Vehicle depth rating: 660 ft. with current design
Range: 40 nautical miles with rechargeable batteries
           400 nautical miles with a fuel cell

Sonar:
455 kHz Sidescan (2-Dimensional)

Manufacturer:
Bluefin Robotics Corporation
www.bluefinrobotics.com