



BLUEFIN
ROBOTICS

HAUV

Hovering Autonomous Underwater Vehicle



HAUV is a two-man-portable hovering AUV designed for ship hull inspection. Equipped with a high-resolution imaging sonar, it surveys ship hulls and other structures with minimal prior knowledge. While surveys are executed autonomously, the operator can manually control the vehicle to further observe features of interest identified in the real-time data.

CONTACT RELOCATION – HAUV can autonomously locate and relocate contacts on a ship's hull with a precision of better than 2 meters CEP 50.

EASE OF OPERATION – The system can be unpacked, checked out and launched from a small boat or pier in less than 30 minutes, and the field-swappable battery and removable data storage module enable rapid turnaround between missions. An intuitive mission-planning tool enables dives to be planned in a matter of seconds, and data retrieval and reporting occur automatically.

HIGH-QUALITY DATA – The integrated DIDSON™ sonar provides high-resolution sonar images that can be viewed in real time over the vehicle's fiber optic tether. Data can also be post-processed into near-photo-quality images or mosaics using third-party software.

PRECISE MANEUVERABILITY – HAUV uses thrusters to hover, rotate in place and translate in any direction, enabling operations in confined areas. A fiber optic tether allows remote manual control of the vehicle for added maneuverability.



HAUV can be easily launched and recovered from a small boat

Applications

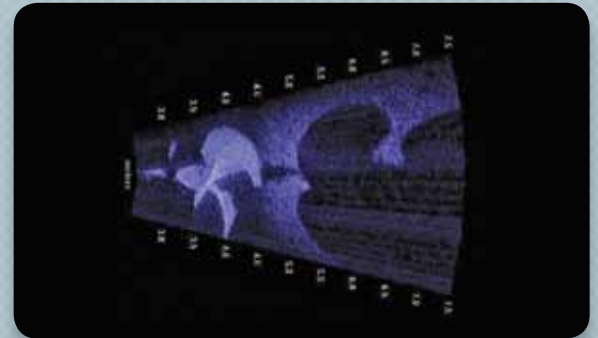
- Ship Hull & Infrastructure Inspection
- Port & Harbor Security
- Mine Countermeasures (MCM)
- Unexploded Ordnance (UXO)
- Scientific Research

HAUV Hovering Autonomous Underwater Vehicle

Dimensions	42 x 39.5 x 16 in (107 x 100 x 41 cm)
Weight (Dry)	174 lb (79 kg)
Buoyancy	1 to 2 lb (500 g to 1 kg) net positive
Lift Points	4 handles for two-man portability
Depth Rating	100 ft (30 m), 200 ft (60 m) (optional)
Endurance	Up to 3.5 hours with standard payload (no current)
Speed	Up to 1 knot
Energy	1.5 kWh of total energy One 1.5 kWh battery pack Lithium-polymer, pressure-tolerant
Propulsion	Five thrusters for propulsion and control
Navigation	Contact location / relocation; 2 m CEP 50, 1 m CEP 50 (optional) IMU, DVL and depth sensor Hull-relative or seafloor-relative navigation
Communications	Real-time Ethernet via fiber optic tether; Ethernet via shore power cable
Safety Systems	Emergency location transponder (optional)
Software	GUI-based Operator Tool Suite Third-party mosaicing software (optional)
Data Management	4 GB removable data storage module (RDSM)
Standard Payload	Sound Metrics DIDSON™ imaging sonar (1.8 MHz)



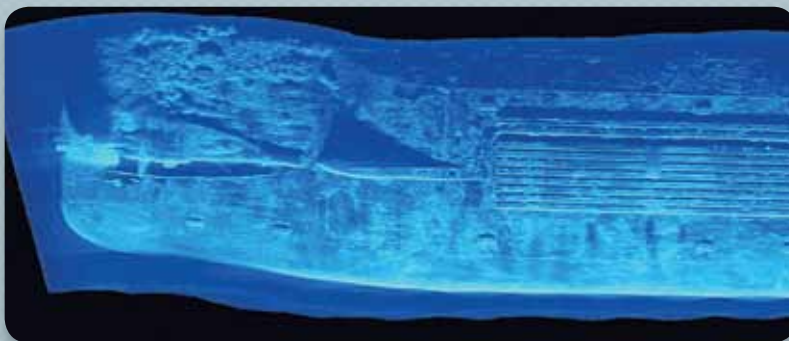
HAUV can be operated in remote mode via a tether



Raw DIDSON™ sonar data of a propeller



SYSTEM PACKAGE — The HAUV comes as a part of a comprehensive system package primarily consisting of the vehicle, support equipment, spares, software, training and 1-year warranty.



Post-processed mosaic of the King Triton vessel



OPERATOR TOOL SUITE — Each system includes an intuitive software package that provides the interface between the AUV and operator for all phases of a mission, including planning, monitoring and execution, data management, and post-mission analysis.