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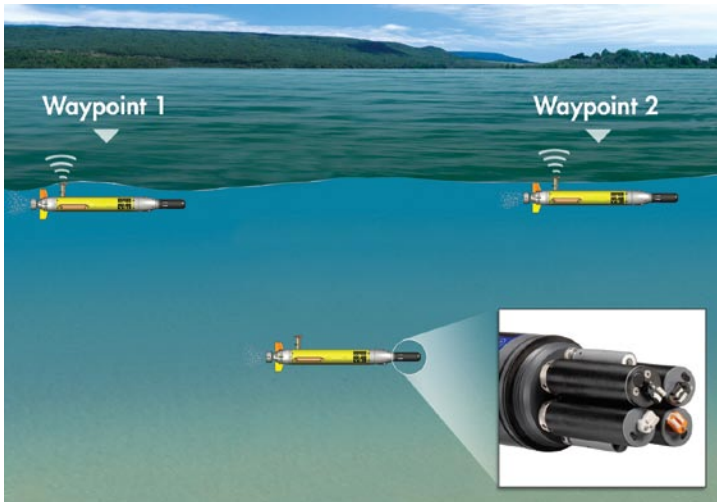
ECOMAPPER AUV

Generate High-Resolution Maps of Water Quality and Bathymetry

YSI introduces a unique system for collecting water quality data. The EcoMapper™ AUV (Autonomous Underwater Vehicle) with YSI's 6-Series sensors will provide researchers and scientists with a data collection platform unmatched in its flexibility and capability. This vehicle can measure up to 10 water quality parameters at a continuous interval for missions up to 10 hours long.



- Underwater vehicle is easily deployed by one person
- Wide-area survey without a workboat or associated staff
- Intuitive mission planning software for quick and easy survey design and execution
- Undulation through the water column provides data in both the horizontal and vertical planes
- Geo-referenced data
- Proven YSI sensor technology



EcoMapper Platform

- Robust and simple to use – minimal operator training
- Low cost of ownership – purchase, maintain, repair, modify
- Bow with integrated sensor package includes YSI's sensor bulkhead, depth sounder, and PAR ports
- Rugged, lightweight carbon fiber and marine grade aluminum construction
- Launch from the shore or small boat
- Li-Ion batteries = long run-time and quick recharge
- Near-coastal operating depth — bays, rivers, lakes (to 180 ft depth)

Once deployed, the EcoMapper communicates with a Wi-Fi box while on the surface (up to 200 m) and acquires a GPS fix at waypoints identified in the mission plan.

- GPS (WAAS) position-corrected data at 1 Hz rate
- Built-in moisture detectors with fail-safe emergency buoyancy system for asset recovery
- Integrated location pinger

Between waypoints, the EcoMapper dives to a specified depth and dead reckons to the next waypoint.

Water Quality Parameters

Temperature	ROX™ Optical Dissolved Oxygen
Conductivity	Turbidity
Specific Conductance	Chlorophyll
Salinity	Blue-Green Algae (marine or freshwater)
Resistivity	Rhodamine
TDS	Depth
TSS	PAR - Upward-facing
pH	PAR - Downward-facing
ORP	

Pure Data for a Healthy Planet.®

Automated Water Quality Surveys



Mission planning software with an intuitive interface

- Simple to use waypoint-based navigation and mission planning
- Select any NOAA or USGS Chart in GEO/NOS format (even geo-referenced satellite images)
- Operator selects measurement depths, speed, sensors, poling frequency, etc.
- Software creates data files to run the mission and organize logging for easy retrieval
- Programmed surveys can be terminated or modified any time the vehicle surfaces
- Easily reconfigurable for new missions or sensors (defined software interfaces)

Available for purchase in the U.S. only

To order or for more info, contact YSI Integrated Systems

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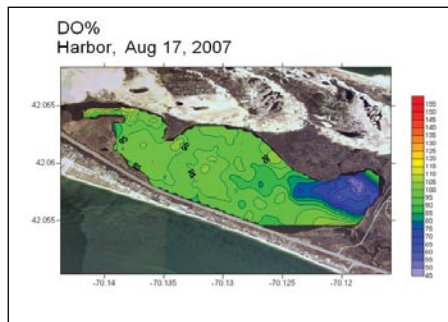
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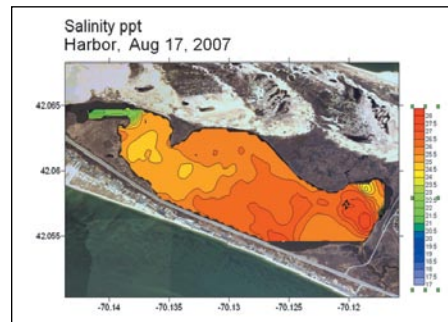
Screenshot from VectorMap mission planning software showing a "lawnmower"-style mission path drawn onto image of saltwater lagoon.



Place the vehicle in the water and start mission.



Dissolved oxygen data collected from saltwater lagoon mission.



Salinity map of lagoon. Notice the freshwater input in the northwest corner.

ISO 9001
ISO 14001

Yellow Springs, Ohio Facility

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EcoMapper AUV Specifications

Dimensions	Diameter Length Weight	5.8 in, 14.73 cm 60.1 in, 152.6 cm 45 lbs, 20.4 kg
Propulsion System		2-blade cast bronze propeller
Endurance		8 hours at speed of 2.5 knots
Speed Range		1-4 knots
Control		Four independent control planes
External Hook-up		Data: wireless 802.11g Ethernet (up to 200 m comm. distance) Power: 2-pin DC charge voltage in
Navigation		Dead reckoning; differential GPS when on the surface
Tracking		Internal data log; programmable resolution
Software		Microsoft Windows®-embedded operating system, GUI-based navigation suite, mission planning software
Energy		600 WHrs of rechargeable Lithium-Ion batteries (>300 cycles)
Onboard Electronics		Low power X86 processor; 80 GB disk drive for data collection
Communication		2.4 GHz radio link when on the surface to download missions and upload collected data
Option		Imagenex side-scan sonar 330 kHz