

Advanced Automated Rescue Craft (AARC)

Autonomous Surface Vehicle



Overview:

The Advanced Automated Rescue Craft (AARC) Autonomous Surface Vehicle is a short-duration solar charged marine robotic platform intended for use in inland and coastal environments. The platform can support a range of applications directed towards the preservation of human life including search and rescue, swimmer safety, and personal survival. The platform's small size enables deployment from trailer, boat, aircraft, or helicopter. Once in the water, the platform can be remotely controlled from anywhere in the world. Simple and intuitive controls enable those onboard to manually operate the platform. The platform is able to carry for people. Recreational versions are also available.

Applications:

- Beach Patrol
- Search and Rescue
- Personal Survival Craft
- Recreational, Civil, and Military Uses
- Air Deployable Operations

Benefits:

- Autonomous Navigation
- Remote or Local Control
- Solar Charged
- Environmental Friendly (Clean / Quiet)
- Rugged, Reconfigurable, Customizable
- Deployable from Trailer, Ship, Aircraft, Helicopter
- Low Cost

Specifications:

Mechanical:

- Self Righting Fiberglass Deck/Hull
- Weight: ~2800 lbs.
- Length: ~18ft.
- Width: ~5ft.
- Draft: ~1.5 ft.

Electrical:

- Solar Charged
- Auxiliary Power Unit
- Battery Bank: Marine Rated Gel Cell
- USCG Approved Navigation Lights

Propulsion:

- Max Speed: ~10 knots
- Nominal Speed: ~2 knots
- Electric Motor and Rudder

Communications:

- Two-Way Real Time Communications
- Iridium Satellite – Global
- Cellular – Regional
- 900MHz Spread Spectrum – Line of Sight
- WAN / LAN
- Proximity Ops R/C – Deployment/Recovery
- Marine Radio – Voice Communications

Navigation Modes:

- Free Drift
- Remote Control
- Waypoint Path Tracking
- Station Keeping
- Onboard Manual Control

Operator Interface:

- Graphical User Interface
- Vehicle Commanding & Configuration
- Telemetry Monitoring (Plots, Tables)
- Summary State Download
- Nautical Chart Display (Planning & Monitoring)
- Google Earth Visualization
- Onboard Camera View
- External Command/Telemetry Interface

All specifications are subject to change. Customization options are available.