



ADJUSTABLE FRAME UNMANNED AMPHIBIOUS AERIAL VEHICLE WITH EXTENDED FLOATS

Seeking parties interested in licensing and commercializing of technology.

Problem Statement

In this invention, the Unmanned Amphibian Aerial Vehicle consists of an adjustable frame mounted on hovercrafts. The extended rails with floats at both sides are attached in the middle of the frame. This float mechanism has been designed to extend and shrink automatically (or) manually, as required. The integrated payload bay with all the operating and control systems is mounted at the top and centrally on the frame. The adjustable frame can be modified to different configurations in size by pushing and pulling the frame axially by folding and unfolding the arms. These modifications are done manually (or) automatically on the ground before starting the mission. The vehicle configuration varies by frame with double hovercraft and frame with single hovercraft.

Technology Category/ Market

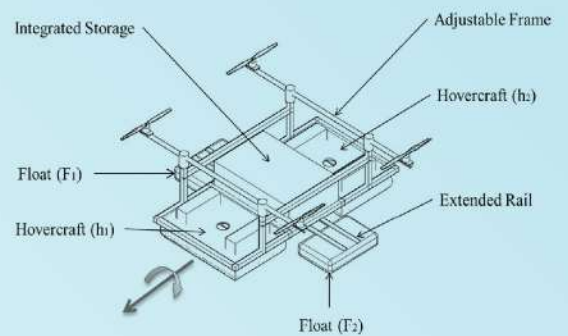
Unmanned aerial vehicles for amphibious operations.

Technology

The Unmanned Amphibious Aerial Vehicle (UAAV) utilizes a double hovercraft setup for enhanced efficiency across diverse missions. Its adaptable configuration shifts seamlessly between single and double hovercraft modes to suit mission requirements. Key components include an adjustable frame equipped with flying motors and propellers, alongside hovercrafts featuring skirts and duct fans for hovering capabilities. This versatility enables operations across land, air, and water surfaces, accommodating varying mission sizes while minimizing structural weight for optimal performance. Configuration options include a) Double hovercraft with extended float

rails, enhancing stability with separate duct fans and skirts for each hovercraft; b) Single hovercraft mode, where the frame contracts to accommodate one hovercraft centrally, with foldable arms ensuring symmetry and clearance. Configuration adjustments are made pre-mission, either manually or automatically, for autonomous vehicles, ensuring seamless integration of components. Additional stability is ensured through buoyancy chambers within hovercrafts and floats, enabling resilience in adverse conditions. The UAAV's adaptability and stability make it ideal for multifaceted missions across challenging environments.

Images of the Technology



Features/ Value Proposition

- ✓ Double Hovercraft Setup
- ✓ Adaptable Configuration
- ✓ Adjustable Frame

Intellectual Property

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TRL Level

TRL- 4, Technology Developed

Research Lab

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