

Performance Characteristics

LAUNCH/RECOVERY

The Adaptive Flight (AFI) Hornet Maxi is a vertical take-off and land (VTOL) UAV. This UAV requires no launch equipment, enables fixed hover for precise observation, and facilitates low-risk retrieval on land or ship. The Hornet is comprised of three main components, the helicopter, the command station, and the Payload Control Station. All of these components communicate with each other and are vital for operation. The helicopter consists of the main rotor, mainframe, Landing Gear, payloads and the Aerial Body (frame shell/skin). The whole system can be ready for flight with in minutes of assembly. (b) (4)

[Redacted]

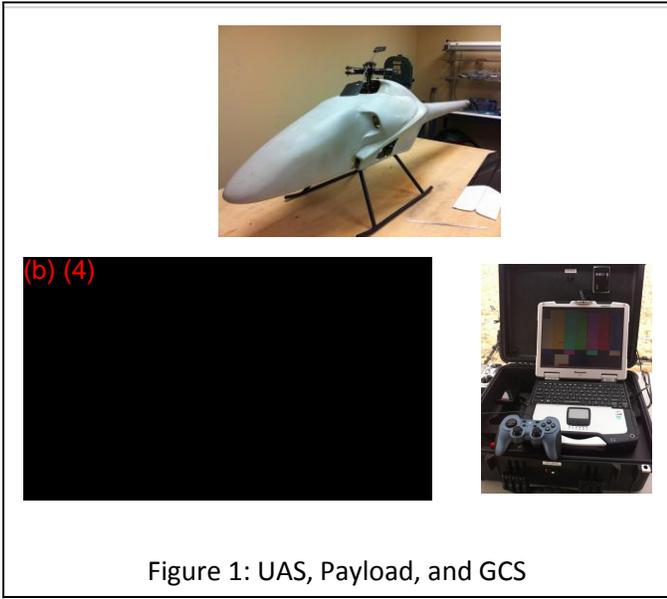


Figure 1: UAS, Payload, and GCS

To begin the flight sequence the operator loads the Mission Control Program (MSC) on the command station and also View Point on the Payload control station. (b) (4)

[Redacted]



Figure 2: Command Station

[Redacted]

However, when the system is prepared to operate (b) (4) the pilot will (b) (4) to bring the throttle on the helicopter to the appropriate RPM after the crewmember is cleared the area. It is important for the pilot to position the helicopter at safe distance from crew and observers. Then the pilot will announce "Rotors spinning up" and once clear (b) (4)

[Redacted]

[Redacted]

[Redacted]

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The pilot completes the flight by manually directing the sUAS to its landing position or activating "Plan C the return home plan" which causes the UA to travel home on a pre-determined flight path. Once the vehicle has returned to the home position the pilot will manually control the decent rate to the ground via the controller. Once the sUAS is within (b) (4) the pilot will (b) (4) When the sUAS touches the ground the Pilot will (b) (4) reduce the throttle of the engine to idle.