

Lost-Link Procedures

The Flight Termination System (FTS) is comprised of a recovery parachute controlled from the ground or autonomously in the event of a catastrophic failure, loss of data uplink or upon exiting an area without possibility of AVO intervention. Its function is to allow recovery the AV with minimum damage during an emergency flight termination and is located on the fuselage underside. Prior to parachute deployment, the engine is killed to prevent damaging the parachute or other flight control mechanisms or surfaces. The FTS will not engage below 500' AGL or above 2000' AGL.

In the event of a loss of link with the Shadow the UA will remain within assigned waived airspace above 500' AGL and below the highest mission profile altitude. After a 15-second timeout, UA will maintain 2000' AGL or current mission assigned altitude below 2000' AGL, proceed direct the Lost-Link Holding and Ditch Point and enter a holding pattern. If after one hour the UA has not regained link, the FTS will engage and terminate the flight as described above. This procedure shall be committed to the flight mission profile through the Mission Planner prior to launch. **(See COA attachment RQ-7B Flight System Including Flight Termination System (FTS))**

Lost Communications Procedures

In the event that two-way communications are disrupted before launch operations, the launch process will be discontinued and the UA will remain on the runway until sufficient secondary communications have been established. If communications are lost during flight operations, the UA will be directed to Lost-Link Holding and Ditch Point for holding until communications are established. If communications cannot be re-established, the AVO will direct the UA to the appropriate TALS recovery point and land the aircraft. If the CGS and Chase Plane cannot communicate, all operations will be discontinued and the Shadow will RTB via Return Home or TALS waypoints.

Emergency Procedures

Preventing a mishap or SUAS loss or damage depends on early recognition of dangerous flight conditions or malfunctions followed by appropriate corrective action. The Shadow crew will memorize the immediate action items of each emergency procedure outlined in the Operator's Manual and IAW Air Worthiness Release (AWR) RQ-7B20100928. Mission planning must include alternative courses of action available for each phase of the proposed flight. During flight, crew members must maintain situational awareness and should always know which direction to fly to escape hazard. Crew members should always know UA position relative to hazards and be ready to assist the AVO with headings and altitudes to fly to safety. Those steps that must be performed immediately in an emergency are underlined and in bold print in the Operator's Manual and operators must be able to perform these steps without referencing the checklist or manual. Non-underlined steps can be accomplished with use of the checklist. During an emergency, the AVO will complete, at a minimum, the following:

- a. Follow procedures outlined in Operator's Manual.

RQ-7B Adverse Procedures

