Rover UAV LOST LINK/MISSION PROCEDURES

Summary: These procedures outline actions to be taken in the event the Rover UAV loses the radio control link communications with the PIC.

Range Check to avoid Loss of Link

Description:

Before each flight, the aircraft radio control system will undergo a range check. This involves activating the transmitter range check button to transmit a low power signal from the transmitter. To pass this range check, the aircraft must maintain control with the PIC and transmitter up to 100 ft away (manufacturer's recommendations).

Procedure in case of Loss of Link During Flight

Description:

If, even though the Rover UAV and radio control system passed the range check, the R/C link should fail in flight, a preset Fail Safe mode in the UAV receiver will cause the aircraft to spiral down within the AO. This feature is NOT an autopilot and the UAC is NOT capable of autonomous flight.

A **loss of link during Flight** would be if the radio link failed or was obstructed, temporarily or totally, while the UAV was being flown by the PIC under radio control.

Action:

The Fail Safe mode is programmed into the receiver by the R/C transmitter. If the transmitter is turned off or loses power, or the link is broken, the receiver sets the servos in the pre-programmed positions to produce a tight spiral down (ailerons and rudder full right, elevator full up, throttle off). This insures that the Rover UAV will not fly uncontrolled out of the AO and possibly cause a hazard to other aircraft or persons. Note that at the time of this application, there has not been a total failure recorded of the R/C link with the R/C systems used by GTRI.

Homing Beacon will be used

Description:

A Walston Retrieval System homing beacon will be carried on board the Rover UAV and will facilitate its recovery should the aircraft land in a wooded or otherwise difficult area.