

Lost Link/Mission Procedures:

The Piccolo autopilot performs pre-programmed actions programmed during pre-flight. DTI programs the autopilot to command the aircraft to a Loss of Communications (LOC) waypoint that is within visual flight range of the External Pilot; 38 24' 37.65" N 77 05' 59.25" W. Timeouts, the time that must elapse before performing the LOC procedure is 30 seconds.

The vehicle will continue to loiter around the LOC waypoint at or below 2000' MSL until fuel is exhausted or until backup systems reestablish the uplink. Upon reestablishing the link, the external pilot will take control of the UAS and land. Flight operations are halted until all issues are resolved.

The Piccolo interface requires both an up and down link with the ground station transceiver and control station software. Prior to flight the autopilot is programmed with a time in seconds that must elapse, with a continuous drop in communications, before performing the LOC procedure. During this time the vehicle continues to fly the last programmed or uploaded route. Loss of incoming heartbeat packets from the ground station trigger the start of LOC time out countdowns.