

Lost Data Link Procedures

1. General:

- 1.1 Due to redundant systems it is highly unlikely for the MQ-1 to lose command link with its associated ground control station (GCS). However, in the event of loss of control link between the aircraft and the launch and recovery element's (LRE's) GCS when airborne, the MQ-1 aircrew will follow the unit's local lost link checklist procedures.
- 1.2 All Lost Link Emergency Missions and associated lost link altitudes will be deconflicted among all UAS aircraft. The lost link altitudes will be at 1000' increments over the Sumner Air Traffic Control Assigned Airspace (ATCAA). All Lost Link Emergency Missions will terminate within the lateral boundaries of R-5104.
- 1.3 At the initial lost link indication the pilot will attempt to regain link of the aircraft IAW TO1Q-1(M)B-1:
 - (1) Attempt to regain link by switching transmitters and antennas.
 - (2) Attempt to regain link by using alternative primary and secondary frequencies.
 - (3) Attempt to regain link by executing climbing and turning maneuvers.
 - (4) If control data link is not reestablished, the pilot will notify ATC that lost link has occurred and that the aircraft is squawking 7600 with the following information:
 - (a) Time of lost link
 - (b) Last known position
 - (c) Altitude
 - (d) Direction of flight

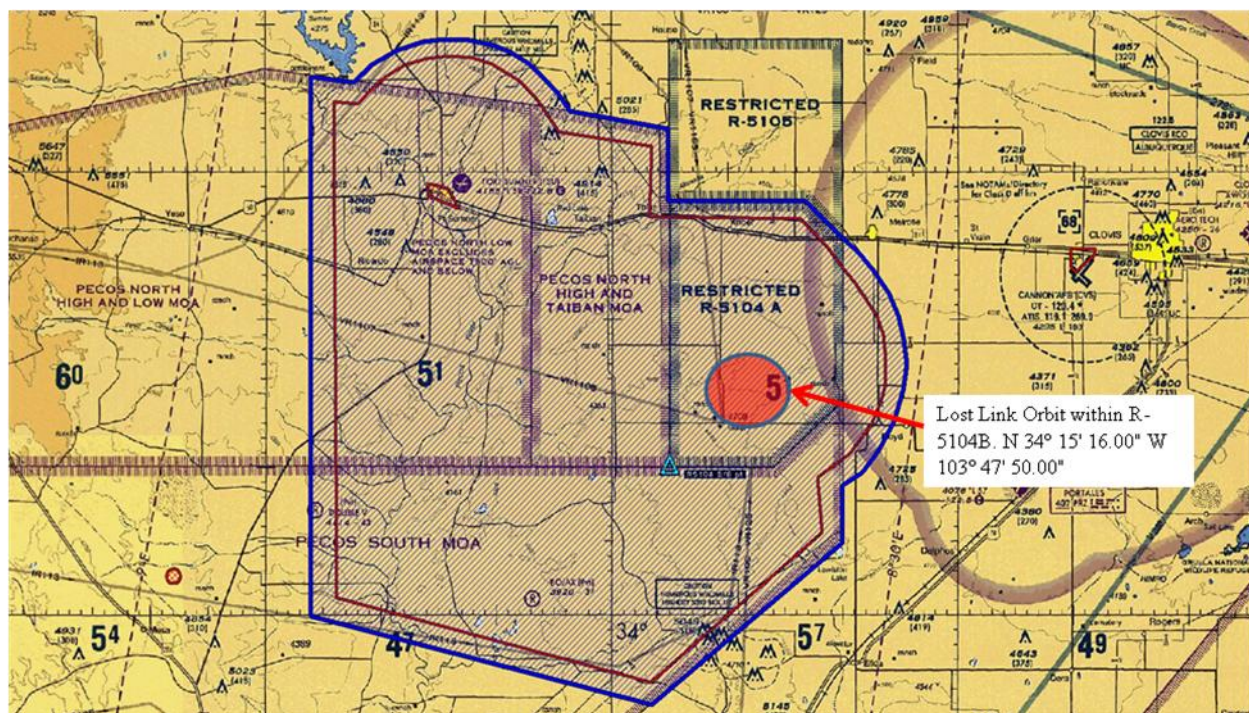


Figure 1. MQ-1 Orbit Area and Melrose Range (R-5104A/B).

2. Lost link procedures:

2.1 Operations will be from FL180 to FL230. This area except for the extensions east of R-5104 and north of Ft. Sumner Muni are within the Sumner ATCAA.

2.2 After initial indication of lost link and the aircraft is unable to regain link, the aircraft's Emergency Lost Link Mission will conduct the following:

- 2.2.1 Aircraft will orbit in a 1.5 NM circular orbit for 30 minutes within the cleared airspace given by ATC and at last assigned altitude (within FL180 and FL230).
- 2.2.2 Lost link aircrew will contact ZAB or Cannon Approach and notify them of the lost link condition. ZAB or Cannon Approach will notify all aircraft within the Sumner ATCAA and other affected airspace of the lost link aircraft. Information will include lost link aircraft's position, altitude, and direction of flight.
- 2.2.3 If still unable to obtain link within 30 minutes, the aircraft will proceed to the Melrose restricted area (R-5104A/B) at the same cleared altitude and on a standardized emergency mission routing.
- 2.2.4 When lost link aircraft arrives in Melrose restricted area (R-5104A/B), the aircraft will enter a six waypoint lost link orbit (3 NM radius centered on N 34° 15' 16.00" W 103° 47' 50.00", see figure 1). This six waypoint lost link orbit will provide a sterilized area in the

event link cannot be re-established. The aircraft will orbit in the last six waypoints until link is regained or fuel exhaustion. At fuel exhaustion, the MQ-1 will lower the landing gear and continue to fly the orbit while descending (engine out) until ground impact.

2.3 If a lost link situation occurs while operating within R-5104, the aircraft will orbit in a 1.5 NM circular orbit for 30 minutes at the last operating altitude.

2.3.1 If still unable to obtain link within 30 minutes, the aircraft will proceed to the R-5104 lost link orbit area and hold until link is re-established or fuel exhaustion.

