

**Emergency Procedures:** During mission planning a variety of possible in-flight contingencies are considered and actions to manage the flight operation of the RMAX ROA during these contingencies are developed.

1. During any contingency, except loss of link, the RMAX ROA can be flown real-time by the ROA pilot. This condition provides the capability to operate the RMAX ROA safely consistent with the fly-ability of the RMAX ROA under the specific anomaly. Contingency planning is accomplished in advance to determine the safest locations to bring the RMAX ROA to the surface that is generally uninhabited. The RMAX ROA is capable of manual and auto-takeoffs, GPS directed waypoint enroute flight and auto-landing. Direct control from an external pilot is also provided and is always used as a control backup mode. It is also the primary manner that is used for take-offs and landings although it is possible to control these maneuvers through the ground control station. A primary two-way data link is used for air vehicle control, with a secondary link used for imagery downlink. If data link control is lost, the RMAX will return to a designated point and conduct an auto-landing. The RMAX's internal flight control computer maintains air vehicle stabilization at all times.
2. In the event of an emergency the RMAX ROA can either be brought down vertically into one of the designated areas or will return to the base station automatically depending on the type of emergency.
3. The protocol for a loss of control link is to shut down the engine first so that it is not running when the RMAX ROA reaches the ground to reduce the risk of fire and injury from the propeller to ground personnel.