Lost Link Procedures:

1. Lost link between Ground Control System and UAV.

In the event that the primary 900MHz link between the Ground Control System (GCS) and the UAV is lost, the GCS generates a visible and audible alarm indicating this loss. The safety pilot and GCS operator then have two options:

a) *Do nothing and allow the Maxi Joker to go into "Safe Mode". The autopilot will execute its automated safe recovery behavior.*

If primary (900 MHz) communication is lost for 5 seconds, the UAV will fly autonomously to a predefined safe location and hover. The safe hover location is located at the center of the Horse Barn Hill test site with the following coordinates: Latitude 41.818888, Longitude -72.248304.

If a robust 900 MHz link is recovered, a manual (using joystick) landing may be performed via the 900 MHz link. If a robust 900 MHz link is not recovered, the safety pilot can take control via the 72MHz link and land manually.

or

b) *Take manual control via the 72 MHz link.* If the safety pilot is comfortable taking control at the instant when the 900 MHz link is lost, he or she will land the Maxi Joker using the backup 72 MHz R/C controller

2. Lost link between Safety Pilot and UAV.

If the safety pilot 72MHz link is lost, then the Maxi Joker will go into the "Safe Mode", upon which it will fly to the safe location and hover.

3. Complete loss of communication (900MHz & 72MHz).

If no control link (900 MHz or 72 MHz) can be re-established after the UAV returns to the safe hover location, then the UAV will hover at the safe location at the altitude at the time the link was lost. If the primary link is lost, the helicopter will hover till the safety pilot can take over. If no link can be established, then the helicopter will hover till the battery is exhausted. The typical flight time is 10 minutes with fully charged batteries.