

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 pilots and GCS operator then have two options:

- a) **Do nothing and allow the autopilot to execute its automated safe recovery behavior.** If primary (900 MHz) communication is lost for 20 seconds, the UAV will fly autonomously to a “safety circle” 100 meters above the GCS. If a robust 900 MHz link is recovered, a manual or automatic landing may be performed via the 900 MHz link. If a robust 900 MHz link is not recovered, the back-up pilot can take control via the secondary 72MHz link and land manually.

or

- b) **Take manual control via the 72 MHz link.** If the pilot is comfortable taking control at the instant when the 900 MHz link is lost, he or she may use the 72MHz backup R/C controller to return and land the UAV.

2. 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 “safety circle,” then the UAV will fly along this circular path until all fuel is exhausted. The endurance of the avionics power supply is substantially longer than the aircraft endurance, so the vehicle will remain in controlled flight even after the propulsion system fails due to lack of fuel. The safety circle is located over unpopulated farmland.