# Safety Memo

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September 2007

This is our first attempt at entering the competition. We have decide not use any auto 2 only auto 0 and auto 1, this affects the safety memo as we do not need to verify any autopilot code.

## 1. System properties

### The vehicle

| | |
|---|---|
| Name | Zoolander |
| Weight | 480g |
| Wingspan | 475mm |
| Propulsion | 1 electric brushless engine |
| Endurance | 20 mins |

### Transmission systems

2.4 GHz analog transmitter for video downlink (500mW)

Digital modem 868 for GPS downlink (10mW)

35.067 RC transmission for RC link

We have n autopilot however we do use a FMA co-pilot [1] which has been set so that the motor will cut if RC link fails. It will also set the elevons to do a 30 degree bank however our put the MAV cannot glide thus it will just drop out of the air. Our MAV will land within a 20m radius from the point where the engine is cut.

## 2. Flight Zone Computation

Our Engine cut-off zone is currently set at 100m from the no fly out zone and as out MAV cannot glide there is no way that we will reach the no fly out zone if we switch off the engine via the RC link and if the RC link fails our MAV will automatically turn off the engine. We will also turn the engine off via the RC link if we lose GPS data.

## 3. Probability to exit a given flight zone

As the our MAV cannot glide and as we will turn the engine off via the RC link if we get within 100m of the no fly out zone or if we lose GPS data and if the RC link fails co-pilot will turn off the engine then there is no possibility of our MAV exiting the no fly zone.

[1] www.fmadirect.com