



*Please remember that questions submitted prior to the entry deadline of 31 October that were not answered in the FAQ must be resubmitted.*

## DBF Q&A #1

6 Nov 2007

**Q:** Our plane as designed will not have its CG located in a position where the plane will not be balanced at the tips of its main wings but instead it will be located between a set of canards and a set of main wings. How should we expect to proceed with the CG verification at the competition?

**A:** Read FAQ General Questions #13.

**Q:** The rules state "Teams will not be told which payload they will fly until they begin the timed payload loading.", the question is since there are so many different payload combinations will:

- All the teams be told on Saturday morning which of the five payload combinations that all teams will fly
- Will teams be able to preload the payloads into a loader before the start of the mission and then the loading time will be how long it takes to load the pre-loaded speed loader
- Will configuration of the payload change for all teams before each flight.

If the payload will change every time for all teams, then how will the overall load time be normalized. It would appear that the more payload items a team has to load the longer it will take that team. For example loading 14 items should take longer then loading only 4 items and the time can be even longer if a team has to load one of the mixed payload combinations.

**A:** Payload combinations will be in a random sequence with at least one occurrence of all payload options sometime during the sequence. The entire sequence may not be used/flown depending on the number of flights made during the weekend. Teams will obtain their payload assignment sheet for the flight during the timed portion of the "loading" task. Any loading of payload elements into a "speed loader" type device can only be done during the timed task. Time is not scaled for different payload combinations. Teams should design their systems to be equally effective for any possible payload assignment.

**Q:** Since the scores are going to be normalized again this year, can we safely assume that the most that any team can score in a single mission is 50 points and that at least one team will have 50 points in a given mission?

**A:** One team should receive a score of 50 for the delivery flight, and one team should receive a score of 50 for ONE of the payload flights. It is unlikely any team would receive a score of 50 on both payload flights, as that would require identical times for each.

**Q:** The rules state that "There is no timed repair of damage in this years contest" does this mean that teams can not repair the aircraft at all or that we can repair the aircraft and take as long as we need? What repairs are authorized if repairs are allowed? What specifically are we allowed to repair / replace?

**A:** Read the Rules under General Mission Specification and Notes highlighted in red. If the aircraft is “damaged”, that flight does not count. You may make repairs prior to a new flight attempt. “Repairs” must be that, repairs to the original aircraft, not replacement with spare parts. For example, you must repair a damaged wing, you can not replace it in whole with a spare wing.

**Q:** According to the FAQ (Flight #5), the aircraft must be "fully flight ready" when measured in the 4-by-5 ft box. If we had a folding wing that could be unfolded , unswept, or extended via a servo (ie, without intrusion from a ground crew member), would that be allowed?

**A:** No. The spot-size configuration must be “fully flight ready”. Folded wings are NOT flight ready unless you plan to fly with them folded.

**Q:** We have an idea of putting the payload inside a device hanging from the bottom of the aircraft. On the first mission the device will be folded in order to reduce drag. Is this allowed?

**A:** No. The rules state: *All external aircraft surfaces (ie any surface presented to the air stream) **must be the same profile**, and the same physical elements, when configured to carry any/all payloads.*

**Q:** To secure the payload, the cargo hatch may not be part of the restraint system. But would two hatches be allowed? One to open as required and another that secures the payload.

**A:** The “Hatch” is part of the external surface of the aircraft. You may use what ever “internal” restraint fixtures you want for securing the payload, provided that any/all such fixtures are stowed inside the aircraft and are carried on all flights as defined in the rules document.

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