



## DBF Frequently Asked Questions



Beechcraft



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Please check the FAQ and Q&A sections often during the competition. **Please note that rules interpretation questions are not answered by e-mail until after the entry date (when all participant e-mail addresses are known), so that all teams will have equal access to all rules information.**

**\*\*\* All Rulings in This FAQ Supplement Are Part of The Official Rules! \*\*\***

### Flight / Mission Questions:

**Question:** Do we have to fly all of the different missions to get a score?

**Answer:** You will get a score for each mission you successfully complete. The flights must be completed in the order specified to obtain a score.

**Question:** If the airplane is damaged on a flight, can we use another copy of the aircraft which has the same design?

**Answer:** No, you must repair the original aircraft.

**Question:** Can we tailor the configuration of the aircraft differently for the different missions? For example, could we use different sized propulsion systems for each flight?

**Answer:** You cannot change the hardware configuration of the aircraft for the different missions unless specifically allowed by the rules for each year (i.e., batteries, payloads, payload support, etc).

**Question:** Is there a minimum altitude for flying the course?

**Answer:** No. Altitude must be high enough for safe flight as set by the discretion of the Flight Line Judge.

**Question:** What would constitute “non-critical” versus “significant damage” on landing as described in the rules?

**Answer:** The decision will be at the discretion of the Flight Line Judge. In general, “non-critical” damage would allow the aircraft to be easily returned to safe flight status. Examples of “non-critical” damage would be a broken propeller, bent landing gear, sheared nylon bolts or minor scratches to the finish. If any component is structurally damaged and would be considered a hazard to safe flight, then it will be considered as “significant damage”.

**Question:** At what wind speed will the contest be called.

**Answer:** It will be up to each team to determine whether they want to fly or not. The Flight Line Judge will determine if it becomes unsafe for teams to fly. Wind speed is not the only factor that may be considered.

### Aircraft Configuration Questions:

**Questions:** Can there be thrust vectoring via rotating the engine, nozzles, blown surfaces etc.?

**Answer:** Yes. Any of the above options is allowed and may be varied during flight provided it is controlled remotely through the RC control system. However, "rotary wing" vehicles are not allowed, so you may need to consult the judges with your specific design doesn't cross over the line into vertical flight capability.

**Question:** What constitutes a major configuration change between the configuration submitted in the 3-view drawing and the airplane presented to Tech Inspection?

**Answer:** Only minor configuration changes are allowed from the airplane design presented in the Design Report and documented in the 3-view drawing and the airplane presented to tech inspection such as controls surface size changes, placement or size of landing gear, location of propulsion motors, etc. Examples of major configuration changes that will not be allowed are, but not limited to:

- Tricycle landing gear to tail dragger landing gear
- Cannot change tail configuration (Conventional tail, T-Tail, V-Tail)
- Conventional wing to flying wing or blended wing body
- Tractor propulsion to pusher propulsion
- Quantity of propulsion motors

The Tech Inspector will make a final determination if an airplane has had a major configuration change.

**Question:** Can we change the aircraft geometry, such as wing sweep or span, for different missions?

**Answer:** Variable geometry is allowed provided it is controlled remotely through the RC control system. You may not "swap out" parts for different missions.

**Question:** Do the external arming plug accessibility requirements (from behind if tractor, from the front if pusher) exclude the use of a pusher-puller type multi-engine configuration?

**Answer:** You may use a push-pull configuration but must locate the arming plug(s) such that they can be accessed by the crew member without having to reach over or around either propeller or being in the propeller disk plane of either propeller.

**Question:** Are folding propellers allowed?

**Answer:** Yes, commercial, folding propellers are allowed.

**Question:** Are modifications to commercially procured propellers allowed?

**Answer:** Only the propeller tips may be modified for length adjustment.

## **General Questions:**

**Question:** Is it safe to assume that if the rules do not explicitly forbid something, it is allowed?

**Answer:** The rules are intentionally designed to not impose too many limitations while allowing each team an equal chance. If something adheres to the "spirit" of the rules it is likely to be allowed. Questions may be submitted as stated in the rules to clarify the rule and its intent or to determine if a general design approach will meet the rules. All submitted and valid rules interpretation questions will be published in periodic Q&A documents over the duration of the competition. Requests to review and approve a team's specific design implementations will not be accepted, only requests to assess an approach against a specific rule or requirement in the form of a question. Teams may request that a question or design approach be treated as confidential. The DBF committee will consider this request and if agreed, will answer the question directly. If the DBF does not agree that it is proprietary or confidential, it will be included in the next published Q&A.

**Question:** What is the maximum number of people that can make-up a team?

**Answer:** There is no specific limit on team size. It is up to the team itself to determine a size sufficient to meet the required tasks and small enough to remain manageable.

**Question:** Is it necessary to list all team members on the entry.

**Answer:** Yes, we need to know all the team members to verify that at least 1/3 of the team members are Freshmen, Sophomores or Juniors and that all team members are AIAA Student Members. Team members may be updated/changed at any time during the contest but must always comply with the 1/3 rule.

**Question:** Is it allowed to have more than 1 pilot on a team (in case one of them cannot go to the contest, or simply have a back-up pilot)?

**Answer:** Yes, teams may use multiple pilots as long as each pilot meets the requirements listed in the rules.

**Question:** Can the plane be flown FPV for competition?

**Answer:** No.

**Question:** How can we disable a battery eliminator circuit (BEC) that is built into the electronic speed control (ESC)?

**Answer:** Follow the manufacturer's instructions on how to disable the BEC function of the ESC. Typically, this involves removing the red wire on the connector from the ESC to the throttle channel on the RC receiver.