



**Cessna Aircraft Company**  
**Raytheon Missile Systems**  
**AIAA Foundation**

***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 #6**

**10 Jan 2009**

**Q:** We have already invested in 72 MHz equipment but are interested in using two transmitters. Is it possible for a team to use one 72 MHz and one 2.4 GHz transmitter for a total of two?

**A:** If you are going to use two radio systems and have been assigned a 72 MHz aircraft frequency you may (must) use a 2.4 GHz system for the second system.

**NOTE:** *If you elect to use two RC systems, both systems **MUST** have failsafe capability. The failsafe requirements for the aircraft control system (primary) are defined in the rules document. The failsafe for the payload (secondary) system is that all stores must remain latched/secure.*

*The secondary system may operate only store release(s), it may not operate any aircraft flight control system, including brakes, flaps, etc.*

*The secondary system may only be operated by the pilot. The observer and ground crew members may **NOT** operate any radio system.*

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

**A:** You may use a push-pull configuration but must locate the fuse(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.

**Q:** A commercial manufacturer we have interest in does not maintain inventory of their product line, but rather builds each on a per order basis. Is it allowed to order from such a manufacturer?

Is it allowed to utilize a company's custom or "available on request" services as long as they are available to the general public? For example, to order a battery pack or motor that is listed in a product catalog but not built during standard production?

**A:** Catalog items may be used. Battery packs may be made with specified numbers of cells but must use catalog/off-the-shelf cells.

**Q:** Does the propulsion battery have to be a single unit (with all cells physically and electrically connected) or can it consist of separate packs with a collective weight of no more than four pounds? Also, is there any

constraint to have a single output connector from the battery or could there be, say, multiple batteries with separate connectors feeding different engines, provided they are all fused.

**A:** You may use multiple battery “packs” to power either multiple or a single motor(s) provided the total weight of all packs flown as a set meet the rules requirement. Any/all packs/motors must be fused such that no single battery or motor can exceed the maximum current requirement. If it requires multiple fuses to meet the current protection requirement, then **ALL** fuses must be removed whenever you are required to “safe” the aircraft system.

**Q:** According to the rules, each team is limited to 4 battery packs for the competition. What is the definition of a battery pack? Can the configuration of a single battery pack be such that multiple sections are wrapped individually, as long as a single power lead comes from the total arrangement?

**A:** You may use multiple battery packs for a single propulsion power system “set/group” as described above. The packs used for a flight set/group must always be used together. You can not intermingle the individual packs. You may have a maximum of four flight sets/groups.

**Q:** We have found marketing materials that state the Nalgene 2121-0010 is specifically not leakproof. In preliminary testing we have not found our bottles to be prone to leakage when sitting sideways or upside-down, but will this factor into the judging decision (payload FAQ #1, part 1) that leakage will result in disqualification?

**A:** See Q&A #2

**Q:** Does the centerline store release mechanism need to release the store when it's empty or full.

**A:** The release system must be able to release the store when full and/or when empty.

**Q:**

**A:**