



**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 #2**

**15 Nov 2008**

**Note:**

- RC Channel assignments for the teams selecting 72 MHz RC systems have been posted.
- Note that if two RC systems are used, with the second system controlling store release as mentioned in **Q&A #1**, **BOTH** transmitters must be included in the box/system weight and storage requirements.
- There have been some questions about the water integrity of the Nalgene bottle since it is listed on some sites as not being water tight. I have been testing a bottle and have found that, when secured tightly, it is water tight. If you are concerned, you may add an o-ring or sealer to the lid when it is secured to assure it's water integrity. If sealant is used to assure the water integrity of the bottle, it must be completely within the cap and can not extend or block the visibility of the bottle beyond the actual extent of the cap.

**Q:** What defines "full" for the water level in the fuel tank centerline store?

**A:** The bottle must be filled to where no air bubble(s) are visible when the lid is attached and the store/bottle is held vertically (cap on top). Thus, there may be a slight air bubble allowing for expansion but it must be small enough to be completely within the extent covered by the "cap".

**Q:** Would we be allowed to build a transmitter/receiver that was solely for the purpose of payload release?

**A:** No. Any RF transmitting/receiving equipment must be commercial FCC approved RC hobby 72 MHz or 2.4 GHz equipment.

**Q:** Are we correct in interpreting the rules to say we have both the Tx and the plane inside the box during the drop test?

**A:** Yes, the radio transmitter must be included in the box when dropped. Note that the drop requirement is not as stringent as that required for shipping of new equipment. You will need to provide adequate structure/padding in your box design to protect all the contents, the aircraft and the radio equipment.

**Q:** The FAQ states that no moving servos or linkages can be attached to the rocket. We would like to know if a plastic tab falls under that category. Also, if there are two parts to our release mechanism such that, one

that is required to be on the plane and the other is on the rocket during attaching, however both pieces are released from the plane during detaching, is that legal?

**A:** Re-read FAQ #1. You may add tabs, brackets, or other structure to the stores providing all moving elements are part of the aircraft, not the store. Only the store itself may be released, there may not be any additional “loose” pieces dropped when the store is released.

**Q:** The rules state that for box construction we are allowed to use composite material. Does foam fall in this category? Also, would fiber glassing or other composite work make the material be considered as a composite?

**A:** Yes, you may use foam, wood, cardboard, plastic, expanded PVC board or other coring material in the box construction. You may include foam, wood, cardboard, plastic, expanded PVC board etc as internal supports/mounts for the contents as well.

**Q:** Can ball lock pins be used in either shear or tension/compression if it can be shown that the force required to pull the assembly apart is some safety factor above the expected loading? For example, attaching airframe components together and having the entire assembly pass the wing tip lift test.

**A:** Yes, you may use “quick release” pins for parts of the aircraft providing the assembly passes the wing tip lift test and the store attachment “shake” test.

**Q:** Can Velcro and or foam be used between structural joints to help dampen vibration if necessary?

**A:** Yes

**Q:** Are morphable aircraft mold lines permissible, such as through the use of fowler flaps?

**A:** Control surface deflections; flaps, ailerons, retracting gear doors, etc are not included in the “mold line” restriction on store placement provided they are not designed to intentionally shield the stores.

**Q:** Besides the motor and the parachute, does the Patriot store have to be assembled strictly according to the assembly instructions?

**A:** The Patriot store must remain dimensionally the same as the kit intent. You may include mounting provisions and strengthen the store to survive the release drop. As stated in the FAQ, the store does not need to contain the parachute and **MUST** not contain a motor.

**Q:**

**A:**

**Q:**

**A:**