

2018-19 Design, Build, Fly Q&A #3

1. Can we use any kind of hand tools during the ground mission for the purpose of radome or attack store installation?

Answer: Yes. But per the rules, only the crew member can touch the airplane or use the tools on the airplane.

2. Does changing the aft-fuselage section to a tail boom, considered a major change if we change that for the report prototype and the contest prototype?

Answer: It is acceptable if the change was made before the report was submitted. After the report was submitted, changing from a conventional tail, for instance, to a tail boom would not be allowed.

3. Does increasing number of battery cells, or generally changing the propulsion system, is it a major change to the report prototype?

Answer: No issue changing the number of cells or changing the motor/gearbox/prop/ESC combination. Adding additional motors would be a major change and not allowed.

4. Is the use of electronic components such as capacitors allowed"?

Answer: Capacitors that are built into the COTS ESC are acceptable. Additional capacitors to store energy in order to boost the power to the propulsion system would not be allowed.

5. Do the cells have to be labelled also? Or just the pack?

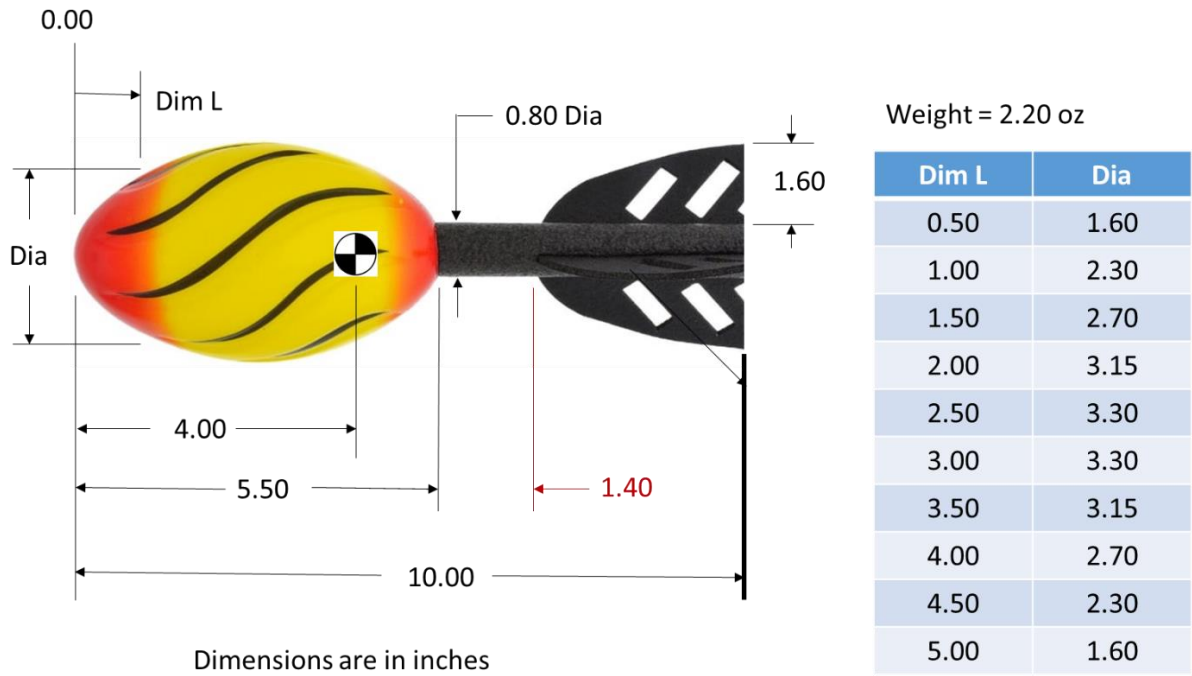
Answer: From the rules: "The individual cells must be commercially available, and the manufacturers label must be readable/documented (i.e., clear shrink wrap preferred). Alternatively, commercially-built pack may also be used. Any commercially-built battery packs must be properly labeled indicating cell chemistry".

6. If we use a nylon cord to release the airplane via the tail hook, does the nylon cord need to still be attached to the airplane or it can unlash it self and remaind with us on ground?

Answer: This is not allowed. The tail hook must be held and released by hand, no tools or aids are allowed.

7. What is the dimension ['x'] shown in the figure?

Answer: See the updated figure below with the dimension added. Also, the replacement stores will be modified to meet the specifications below by trimming the length of the tail fins (as depicted in the figure) and adding weight.



<https://www.dollartree.com/two-tone-missile-foam-footballs-12-in/252857>

8. During the competition, since AIAA will be providing us with the attack stores, can we choose them from the lot or will they be given randomly?

Answer: They will be provided randomly.

9. Can we disconnect the locking and folding servos after the wing tip locking check and before flight?

Answer: After the five-minute assembly and check out time in the staging box, the airplane cannot be modified, altered or worked on in any way prior to entering the flight line. This rule will be strictly enforced.

10. Also how many people can enter the staging box and conduct the locking check and attach the payload before flight?

Answer: This is clearly stated in the rules – only the crew member can work on the airplane in the staging box.

11. If the team find that it can drop more or less stores than purposed in the final paper, can the mounting structure be modified to account for it?

Answer: Yes as long as the basic configuration of the aircraft does not change.

12. Can we have two tail hooks?

Answer: Since there is only one aircraft centerline, only one tail hook can be incorporated. Only one will be allowed to be held for take-off from the ramp.

13. Do the first four stores dropped need to be the laterally placed stores under the wing?

Answer: The order of dropping the stores is up to each team to decide.