FAQ: 2022-2023 Design-Build-Vertical Flight Competition
[Updated 12/1/2022]

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Q: In the RFP teams are told to climb vertically to 5 feet before beginning cruise. So teams must climb vertically to 5 feet before cruising, but are not required to cruise at 5 feet during the entire flight?
A: That is correct. The intent of this verbiage is so that VTOL take-offs and landings are conducted. Once the aircraft has cleared the landing pad, however, teams are free to fly at higher altitudes. The host will likely cap flight altitude closer to the competition, which will be shared with teams.

Q: Please confirm that the Chinese made component restriction of last year is no longer required?
A: That is correct. Teams should be using only the 2023 RFP as their guidance. Any information from previous year RFPs no longer applies.

Q: Are any FAA waivers required for operation at the competition?
A: No FAA waivers will be required at the competition. The UAS will be operated within the host's COA airspace. As such, the host (SURVICE) will set any rules and restrictions for flight operation within their private airspace such that all teams operate in a safe fashion and in accordance with the rules given to them by the FAA for their airspace.
Q: Will the competition take place in the rain, or will we move to an alternate day within the span of the competition?
A: The event host will make the final go-no go call for inclement weather. Teams may elect to pass on their flight opportunity if they deem the weather to be too adverse for operation of their aircraft. The next team in the flight line would then move forward in the rotation. Time pending, a team that gave up its flight slot may have another opportunity later to fly their aircraft. This flight line rotation will be discussed in greater detail as the competition draws closer.

Q: What is the rough amount of time between flights that our team would need to complete a battery swap in?
A: The past years' competitions gave each team a period of time within which they had to perform all flight course attempts, including any time to reset and reconfigure between attempts. Speed of a battery change should not be a limiting factor here. A more precise timeline of events will be forthcoming once the total number of teams is known and exact fly-off schedule is drafted.

Q: Can a few more details be provided on the 5 ft. flight height for the autonomy course? Is that a rough "eyeball" measurement, or do we need to prove that we are staying within a tolerance of 5ft?
A: Yes, it is a rough eyeball vertical take-off. The decision rests with the course judge. Some leniency applies, but a VTOL takeoff is the intent of this verbiage in the RFP. The course judge may first warn a team if vertical take-off and landings are not being conducted, and may choose to disqualify a course attempt if they deem the team to repeatedly violate the requirement. For practical reasons, 5 ft can be considered eye-level of the pilot.

Q: Additionally, does this 5ft height apply to the performance course as well?
A: Yes. All take-offs and landings should be done VTOL.

Q: Can more details be provided on the charging / power situation at the competition grounds? Will teams have the ability to have a laptop plugged in for power as our ground station, or is it just for recharging LiPo batteries?
A: A power station will be available both on the flight course and back in the team working locations. A separate facility may be provided for charging of LiPo batteries. More information on this will be forthcoming from the host.

Q: It was mentioned that it is necessary for every team member to become a member of Vertical Flight Society to participate in the Design-Build-Vertical Flight Competition. We do not belong to any of the Chapters, so what should we do?
A: An individual does not need to be part of a VFS chapter in order to join the Society. A chapter will be assigned once a person becomes a member based on their address/zip code if provided. https://vtol.org/what-we-do/benefits-of-membership

Q: Would a European A2 drone flying license be accepted as equal to the FAA Part 107 drone certification?
A: Yes, a European A2 drone flying license is an acceptable substitute.
Q: Can we still add more members to the team?
A: Yes, *teams can add additional members at any time*. VFS does not need to be updated with any changes to the main team roster. For purposes of the fly-off, teams will submit a list of students to VFS of who will attend. This list must be updated ASAP if any changes are required (see RFP).

Q: Does a regular failsafe system that cuts throttle to zero on signal loss meet requirement number 8 under section 4.0 in the RFP document?
A: *Yes it does.*

Q: For the autonomy flight course, can the aircraft fly without payload?
A: *Yes, it can fly without a payload for the autonomous flight course.*

Q: We have found the 2020 version of the “Achieving Autonomy” document mentioned in section 8.0, is this the latest version available?
A: *Yes, this is the latest version created by a past competitor to give a helping hand to future competing teams.*

Q: Is assistive autonomy permitted in the piloted / performance course? An example of assistive autonomy would be a system that keeps altitude at 5 ft during cruise or a system that holds the aircraft in place when the pilot releases control input.
A: *Yes, this is permitted.*

Q: We understand that the propulsion and flight control systems must have separate batteries. Does this mean that only their power supplies must be separate, or that their electrical systems must be entirely separate? We would like to run a battery monitor through our flight controller that monitors the battery life on our propulsion battery, but just want to make sure that is acceptable.
A: *This would be acceptable so long as the connection between the propulsion system battery and the flight control system is not a high-power carrying line.* i.e. Any connection should transmit a signal only, and no substantial amount of power. *This separation of propulsion and flight control system battery is commonly done to allow continued control of an aircraft even after a remote-kill command has been issued to the main propulsion system battery, or if it has otherwise failed.*

Q: How are the Letter of Intents (LOIs) scored?
A: *LOIs are reviewed for completeness only.* The LOI requirements are found in the RFP.