

STEAM DRONE CODING FOR VIRTUAL DRONE RACING CHALLENGE

RULES & GUIDELINES

will likely vary somewhat as per local host

The **Drone STEAM Challenge Series** announces its call for entries for the *Drone Virtual Racing Challenge*.

1: Eligibility: The competition is open to individuals or groups of professionals, amateurs, residents, students, and visitors, as per specific guidelines and constraints of contest host (*e.g., students only*)

2: Fees: See the submission guidelines provided for each individual contest.

3: Purpose: To evaluate a pilot's skills in piloting a virtual drone through a timed, three-dimensional obstacle course to illustrate the efficient use of drone technology in the National Airspace System and to recognize outstanding performance by participants in real-world, scenario-based situations.

4: Format: Some challenge events will be entirely virtual, where pilots do NOT need to be on site for competition, whereas other challenge events will be "on site", dependent upon the local host. The time slots assigned for racing will be approximately 15-minutes, and races will begin promptly.

5: Equipment Needed: A computer, software, and a controller

- Virtual drone pilots will need the own copy of the *VelociDrone* software (about \$25) installed on an Internet-connected, gaming-style computer that can handle high speed, memory intensive video . This is available online for download at: <https://www.velocidrone.com/>
- Virtual drone pilots will need a remote controller designed for drone flying (about \$50). Many options are available, but a good example is *BETA FPV Literadio 2 SE Transmitter and Receiver Left Throttle Frsky D16 FCC RC Remote Controller with FPV Simulator Function for FPV Racing Drone* (<https://amzn.to/3k4ISZ6>). Numerous videos on how to set up a controller to work with *VelociDrone* are available at: <https://www.youtube.com/playlist?list=PL11jbUrbAAbDARPKsG3oDTiwCkYfcp7oi>
- Virtual drone pilots will need to have access to email to obtain their specific assigned race date and time.

- *OPTIONAL: FPV First Person View Goggles are completely optional for virtual drone pilots, and \$75 example is the BETA FPV VR01 FPV Goggle with 5.8GHz 40ch Receiver at <https://amzn.to/3mcOdQQ>*

6: Preparing for Virtual Competition: Virtual pilots will benefit from considerable practice. A number of *YouTube* videos are available for virtual drone flight training at: <https://www.youtube.com/playlist?list=PL11jbUrbAAbCZ0N5t1LbR1amVED5WF7Lg>

7: During the virtual racing competition, pilots will need to use *VelociDrone* and initiate a *multiplayer session* to access their assigned racecourse, using a specific track room code provided by the race administrator. *Up to six other racers might be racing on the same track at the same time.*



VelociDrone main menu

8: Shortest time to complete the race, which might involve multiple laps, wins.

9: Spectators: If you would like to observe a virtual race, there is a SPECTATOR MODE but spectators will need their own computer and their own copy of *VelociDrone*.



Spectator Camera

The camera of the person you are viewing will be indicated at top left of the screen where your player name is usually displayed.

In some instances, the virtual race challenge might be streamed over *YouTube* or *FaceBook* or *Zoom*, if local circumstances allow.