AERO MAX

This is a high-energy drone racing competition where teams must design and build drones capable of carrying a 100g payload and navigating through a series of obstacles to reach the final checkpoint. The primary challenge is to complete the course without dropping the payload or colliding with the obstacles, all while keeping the drone airborne. Teams will be evaluated based on speed, precision, and their ability to avoid penalties.

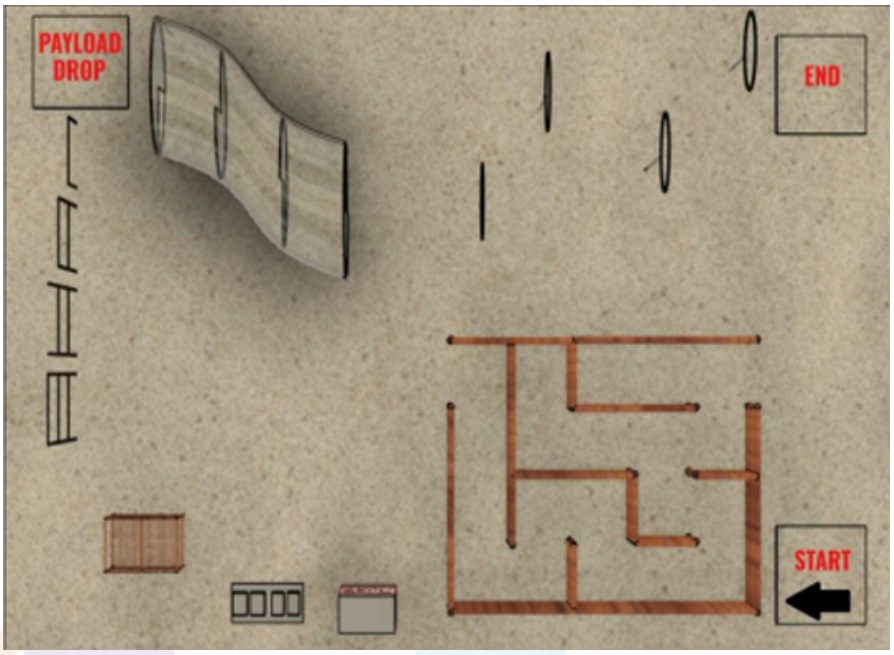
Participants will have to demonstrate strong drone piloting skills, innovation in design, and technical prowess. The goal is to promote creativity and problem-solving among students, encouraging them to explore drone mechanics, aerodynamics, and control systems.

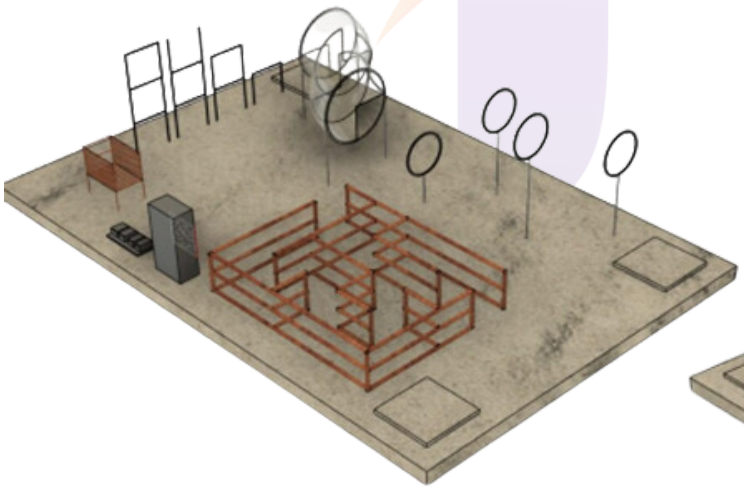
DRONE SPECIFICATIONS:

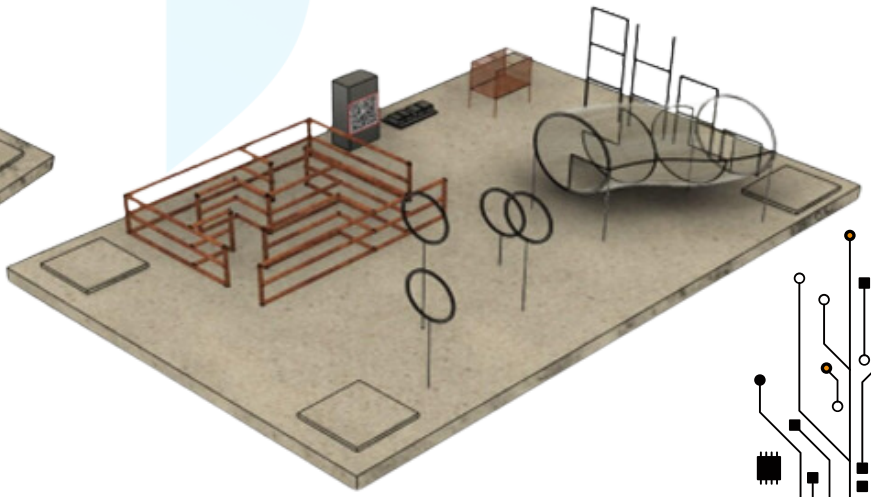
1. **Size:** The drone must not exceed 75cm x 75cm x 75cm (L x W x H).
2. **Weight:** The maximum weight of the drone, including the 100g payload, must be less than 3kg.
3. **Payload:** The drone must carry a 100g payload throughout the race. If the payload is dropped at any point, the team will need to restart from the last checkpoint.
4. **Build Requirement:** Drones must be built from scratch by the team members. Off-the-shelf or pre-built drones will lead to disqualification.
5. **Power Source:** Drones can be powered by a battery with a maximum voltage of 22V (4S battery).
6. **Ready-Made Kits:** Use of ready-made kits is strictly prohibited and will lead to disqualification.

ARENA MAP(This is just for reference)

The arena consists of five checkpoints spread across a 3D course filled with obstacles such as hoops, gates, and hurdles. Drones must navigate through these checkpoints without touching the ground or obstacles.







Note: A detailed arena map will be provided during the competition briefing. The course may include vertical climbs, narrow passages, and varying obstacle heights.

EVALUATION PATTERN:

The evaluation is based on a combination of speed, accuracy, and adherence to the rules:

1. **Time:** The team that completes the course fastest with the least penalties will score higher.
2. **Penalties:** Points will be deducted for ground touches, collisions with obstacles, going out of bounds, and dropping the payload.
3. **Checkpoints:** Points will be awarded upon crossing each checkpoint successfully.
4. **Performance:** Precision in controlling the drone and completing the course will influence final scoring.

COMPETITION RULES:

1. **Drone Handling:** Only one member of the team is allowed to operate the drone during the run.
2. **Payload**: The drone must carry the 100g payload from start to finish. Dropping the payload results in a mandatory restart from the previous checkpoint.
3. **Ground Touch:** Each time the drone touches the ground, 10 points will be deducted.
4. **Obstacle Contact:** A 5-point penalty will be imposed for each time the drone touches an obstacle.
5. **Checkpoint Crossings:** Drones must pass through all checkpoints. Missing a checkpoint will result in a 20-point deduction, and the team must restart from the previous checkpoint.
6. **Boundary Violation:** Exceeding the arena boundary results in a 5-point deduction.
7. **Judges' Decision:** The judges' decisions regarding penalties, scoring, and adherence to rules are final and binding. No arguments will be entertained.
8. **Drone Construction:** Teams must use drones they've built themselves; any use of a ready-made drone or kit will lead to immediate disqualification.
9. **Identity Verification:** Teams must carry a valid ID (Aadhar card/college ID) for verification at the event.

NOTE - If time permits the second chance will be provided

GENERAL RULES:

1. Only one team member is allowed to handle the drone during the race.
2. Participants are not permitted to place any items inside the arena other than the drone.
3. External electronic devices (laptops, phones, Wi-Fi, Bluetooth, etc.) are not allowed near the arena. All wireless devices must be switched off during the competition.
4. The time recorded by the organizers will be considered final for scoring purposes. Timing from any other source will not be accepted.
5. In case of any disputes or discrepancies, the decision of the judges and organizers will be final and binding.
6. The organizers reserve the right to modify the rules as they see fit. Any changes will be communicated to all teams in advance.
7. Only one team is allowed inside the arena during their run. Other teams must wait outside the competition area.
8. Participants must report to the event desk an hour before the competition begins to collect their competition slots.
9. Misbehavior, including arguments with judges or other participants, will result in immediate disqualification.

This rulebook serves as the foundation for fair play and the smooth conduct of the drone competition. Teams are advised to adhere strictly to the specifications and rules outlined to ensure a competitive and enjoyable event.

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INQUIRIES

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LOCATION:
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