



Drone Mission:	Level	Team	Building
Fly, Evade and Attack	Junior / Senior	1-2 persons	Pre-Made

I. Game Description

It is a competition in which drones are piloted to fly along a designated route to avoid and destroy targets. Each team has one pilot and one co-pilot. The co-pilot will perform technical tasks such as changing batteries and recovering downed drones. Each team will have two minutes to complete the mission and two chances to test it, with the best score being used to determine the winner.

II. Equipment Requirements

Equipment	Description
Model	Quadcopter
Wheelbase (Motor base distance)	75mm – 120mm ** (Edit 9 September 2025)
Type of motor	Any
battery	Not more than 8.4 volts (2S battery)
Take-off weight	Not more than 90 grams ** (Edit 9 September 2025)
Flight Safety Design	Protective cover
Control	Remote Control, Phone, Tablet
Flight Performance	Flying machine needs to have the flight performance of attack the target on the spot

III. Mode of Competition

1. The competition is an individual competition (fly by 1 pilot), the competitor adopts the third view or by sight to follow the way of remote-control aircraft through the obstacle field and finally complete the target striking, the competition time is 2 minutes. In addition to examining the flight control ability of the competitors, the competitors will be examined more about their emergency response ability and decision-making ability in specific situations. Primary and Junior High Schools can complete the obstacle course and strike according to the established route. Senior division needs to complete a one-week circle around the obstacle (clockwise/counterclockwise is acceptable) at the place marked on the field map. The course site and specifications are shown in Figures 1 and 2, and the targets are shown in Figure 3



2. All the AIRCRAFT used in the competition will be provided by the competitors themselves. Each team can have an unlimited number of drones, but can only use one at a time. In the competition, a spare drone is permitted, but must be notified to the judges and brought for inspection before the start of the competition. It must be prepared at the side of the field while the competition is taking place. Spare batteries are permitted, no more than 2, and must be notified and prepared before entering the field.
3. The order of each team will be announced before the competition begins. Each team will have two chances to compete, with the best score being used to determine the order of the competition.
4. When the competition starts, competitors enter the **Take Off area** and have 30 seconds to test the equipment before the actual **Take Off** . After completing the preparation, competitors signal the referee to start the test. The referee will call "Ready!" and count down "3 , 2 , 1 , **Take Off!**" The pilot must listen to the command before being able to fly the mission. If the pilot takes off before the command, it will be adjusted to **a False Start** and has the right to take off again after receiving another signal. Competitors can follow the drone but must stay in the designated zone and must not encroach on the flight area. During the competition, if the drone malfunctions during the competition, the competitor can fix the problem . But, time will not stop during the problem solving process .
5. During the mission, competitors can use first-person view (**FPV**) or visual control to fly through obstacles along the initial flight path (the flight path is shown in Figures 1 and 2) . If the drone has an accident, crashes, or crashes, or requires repair, it can be done and can take off at the accident or crash site, or repair it to continue the mission, while the competition continues. If the drone is damaged to the point where it cannot fly, competitors can change to a backup drone prepared before the start of the competition (if not informed to the judges in advance, it cannot be changed). Competitors can also change the battery during the competition (the battery must be shown to the judges and carried with them during the competition).
6. After flying along a designated path through all the obstacles on the course, the contestant must pop two balloon targets by hitting the targets on either side of the targets to pop the balloons with the needles from the targets.
7. The referee will start timing the competition from the end of the command " Take Off" until the plane lands, which is considered the end of the competition. When there are 20 seconds and 10 seconds left in each test round, the referee will call " xx seconds left" (at other times the time will not be called) and the players will choose whether to land or continue destroying the Target according to their own situation. When there are 5 seconds left, the referee will announce by counting down "5 , 4 , 3 , 2 , 1 , time up", and the competition in that round will end.



Scoring and Judging

1. Total match score = 120 – Match time + **Target attack score** + Landing score – Any other deductions. The lowest score is 0 points.

Example : The time of the match is **120** seconds and the score is converted to seconds. If the landing time is **1'20"30** , the time will be **80.30** seconds .

2. Attacking a target will score 100 points per target.
3. Technical Score for Attacking Targets Competitors can score extra points for attacking targets as follows:
 - a. **Boomerang** is a move where you control your drone to hit the balloon from behind and burst it. You will receive an additional 100 points.
 - b. **Big Bang** is a move where you control your drone to pop both balloons at the same time with a single hit, which will give you an additional 200 points.
4. **If there is a tie**, the rankings will be as follows:
 - a. Those who fly for a shorter time will have a higher ranking.
 - b. If the time is equal, the one who attacks the target more will have the higher ranking.
 - c. Those who received less points in the obstacle course

5. Deduction of points

- a. **Take off** before receiving the signal from the referee will be deducted 3 points.
- b. Each time an aircraft touches the ground during flight, 2 points are deducted (no points are deducted if it touches the ground during an attack on a target).
- c. Each time the aircraft touches an obstacle during flight, 2 points are deducted (not including contact with structures during an attack on a target).
- d. If the drone is touched during a mission after **takeoff** , 2 points will be deducted (excluding accidents that require repairs or if the aircraft falls and is re-arranged for re-flying).
- e. **During the flight mission in the obstacle zone** The pilot must fly through each obstacle one at a time. No mission point may be crossed. If the pilot crosses any obstacle, the judges will warn him to return to that point to complete the mission. If the pilot crosses the obstacle once, he will be deducted 4 points and must return to complete the mission at that point. If the pilot crosses the obstacle a second time, he will be deducted 6 points. If the pilot crosses the obstacle a third time, he will be deducted 20 points for each mission point.
- f. If the ball flies out of the competition area (hits the safety net), 5 points will be deducted.

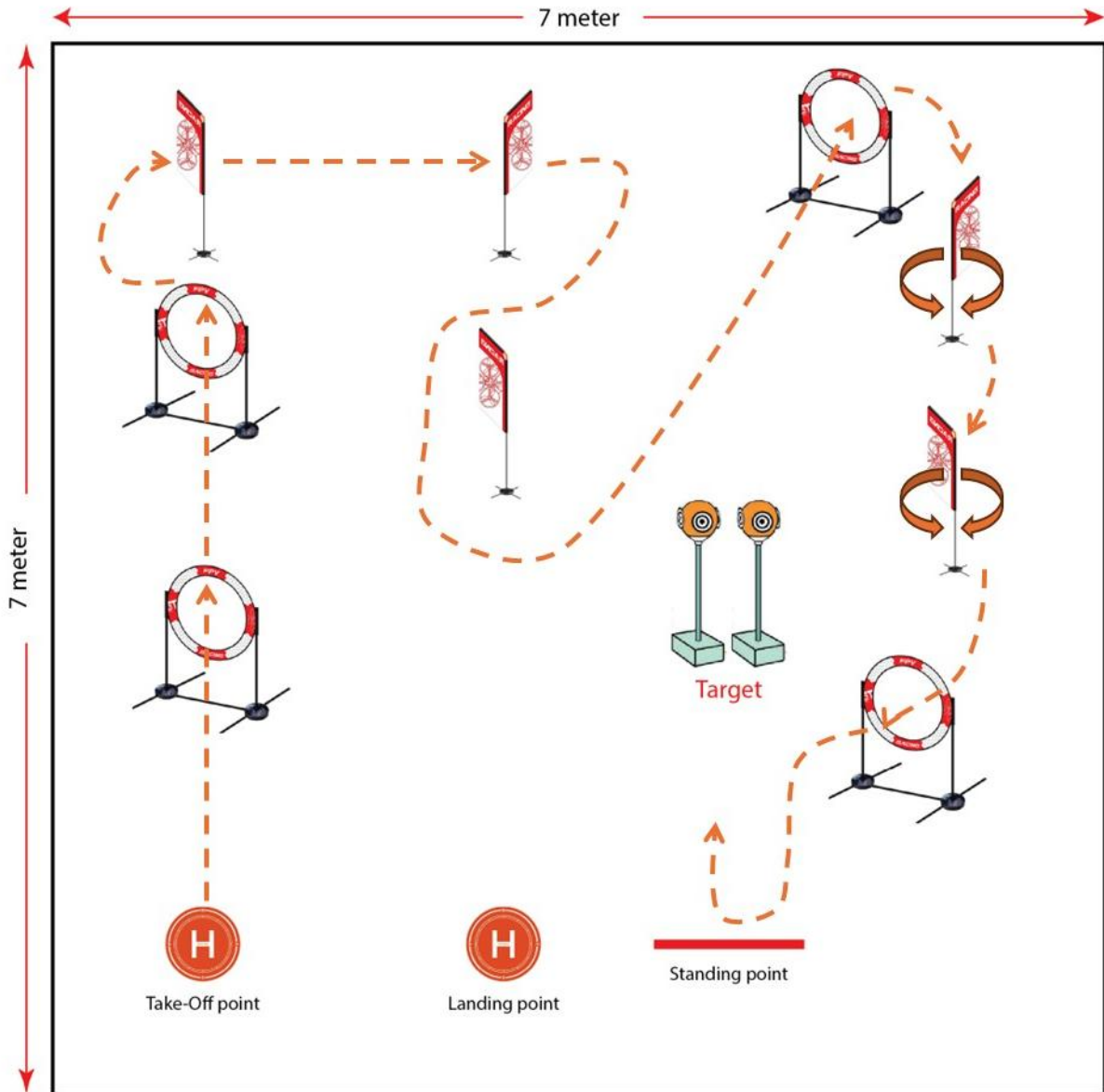
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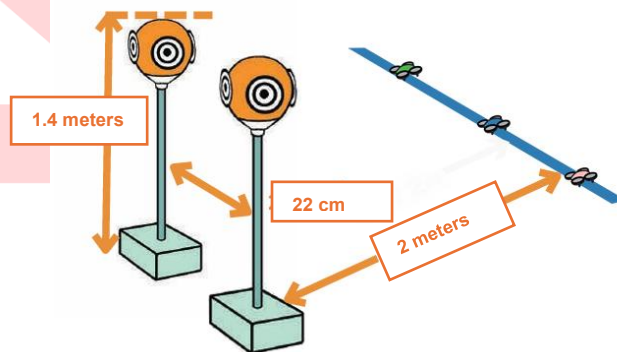
- g. **Landing Point** 10 points. If any part of the drone (including the propeller guards and legs of the drone) extends beyond the landing area (within the white circle), 2 points will be deducted. If any part of the drone (including the propeller guards and legs of the drone) extends beyond the Landing **Pad** , 5 points will be deducted. And if the landing is abnormal, such as falling or falling in an accidental manner, 5 points will be deducted.
- h. Pilots may follow aircraft in overpasses, but must not enter the flight area and must remain within the designated area while attacking targets , and will be penalized 30 points each time they leave the designated area or enter the competition field.
- i. If the drone falls to the ground or for any other reason is unable to continue flying (excluding collisions with obstacles or other accidents), the competitor may manually quickly reset the drone and place it back in its original position, crediting one touchdown **with** no points deducted.
- j. While flying through obstacles or attacking targets , if the competitor determines that he/she cannot continue flying, he/she can request to stop the competition with the referee. The referee will stop the clock and the game will end. The competition time will be recorded as 120 seconds and the score of the attacked target will be counted , minus any other scores made incorrectly, and an additional 5 points will be deducted for the failure to complete the mission. If the score is deducted until it is negative, it will be adjusted to 0 points.

*** The decision of the committee is final and cannot be contested .



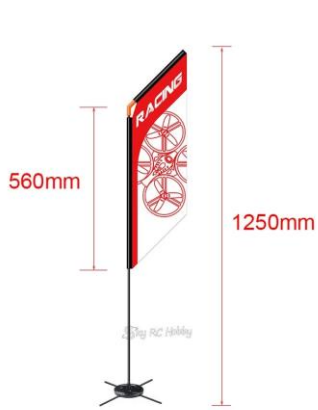


Picture 2 : Senior flight routes

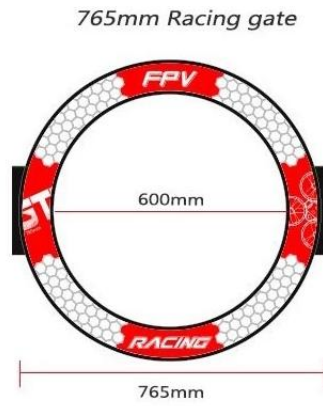


Picture 3 : Target

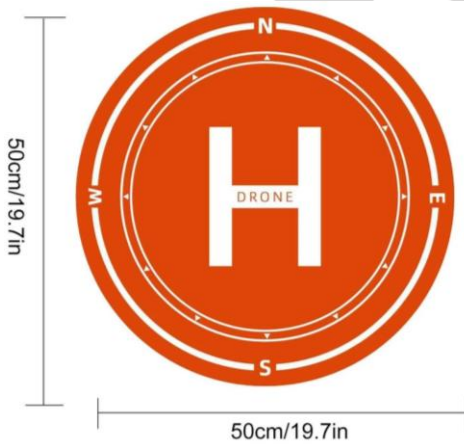
V. Field equipment



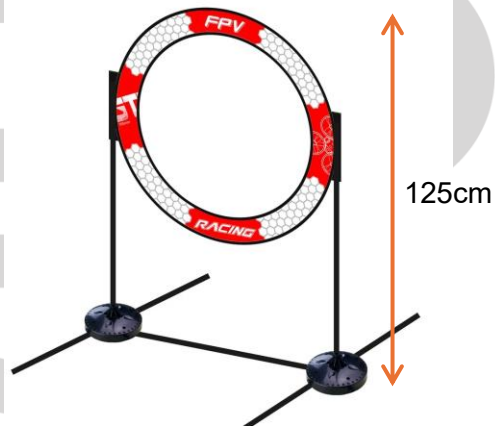
Picture 4 : Racing Flag



Picture 5 : Racing gate



Picture 6 : Take-Off and Landing pad



Picture 7 : Racing gate



Figure 8: Wheelbase measurement .

VI. Special attack

- a. **Boomerang** is a drone attack where you hit a balloon from behind and it explodes. This gives you an additional 100 points .



- b. **Big Bang** is a drone attack where you hit two balloons at once and get 200 points .

