

## JetToy - Rules & Regulations for National Olympics

The JetToy Olympics offers teams an opportunity to engage in a friendly competition with students from other cities using SAE International's – *A World In Motion*® JetToy program.

### **Materials & Vehicle Specifications:**

1. JetToy vehicles in the competition must be constructed at the competition venue, on the day of the event using materials supplied only in an official JetToy kit. All the toy making material to be used will be made available by the organizers to the Student team.
2. Teams may build multiple JetToy vehicles to use in different events.
3. Only one balloon motor per vehicle should be used by the teams as propulsion system.
4. Team can use Different nozzle sizes for different events.
5. No propulsion system besides the balloons and nozzles should be used for JetToy.
6. The test vehicle size should not be larger than 140x60x40 mm (LXWXH).
7. Teams are not allowed to use any external material for the construction, decoration & preparation of the concept car in presentation round. Any such external material usage if found will lead to the elimination of team.  
Teams, however will be allowed to use external material for demonstrating the concept in front of the Judges. E.g. Tub with water, Wooden ramps, Tables, Rope, etc.
8. Tampering of Nozzle and Axle will not be allowed for the event.
9. Any kind of foreign material impacting the propulsion system may lead to team disqualification.

### **Race Lanes:**

1. The floor of the Race lane should be of Natural stone like Marble, Granite, Kota. Plain Cement (koba), Epoxy coated concrete floor or of large size ceramic tiles. Surfaces like rubber matt or any other surface which will hamper the natural movement of the toy car will not be acceptable as a Race lane. Engineering Education Board (EEB) will reserve all the rights to certify the floor for National event.
2. Teams will have to perform on the assigned race lane for the competition. This can be either team specific lane assignment or event specific lane assignment.
3. The race lane will be 10 meters length by 3 meters wide. For all performance tests, points will be awarded after the vehicle comes to a halt with the position of 50%+ of the vehicle marking point from the front end that vehicle has traveled except for the speed event where the time will be noted at the 3m mark.
4. For the speed event, if the vehicle does not cross 3m mark the attempt will be declared invalid.

5. During any attempt by the team, if the vehicle does not move from the start point even after release of the Nozzle, the attempt will not be counted and the team will be given chance to inspect their vehicle again. Minor repair will be allowed and should be done in front of track judges (no external help allowed).
6. If a vehicle leaves the confines of the lane points will be awarded at the location of exit, as per track scoring guideline.
7. JetToy when released from the Start position during Speed test should have all the 4 wheels grounded. An attempt will be provided if the Jettoy wheelies abruptly (max 2 times per team) If the Jettoy is found wheeling regularly the event will be disqualified for the team.
8. While performing on the track, Teams will be allowed to replace the Adhesive Tape in case the tape is not able to hold the balloon motor in place because of the following reasons,
  - a. the Adhesive Tape is old & does not have proper adhesive property or
  - b. in case the Adhesive Tape loses its adhesive property because of the high ambient Temperature at the venue on the event day.

Note : Teams should use the Tape provided by the Track Judges only.

9. Teams will be given three attempts during the competitions. However the teams are allowed to use **ONLY One JetToy** for taking all the 3 trials for a particular track.
10. Marking system is as in the table given below. Please refer to **JetToy Olympics – Track Description & Scoring Guide** for specific event scoring details.

Sr.No.	Performance	JetToy
1	Distance	10
2	Weight	10
3	Accuracy	10
4	Longest Travel	25 <sup>#</sup>
5	Speed	*
6	Presentation	*
Total		55

- # Max points awarded will have a sealing for “Longest travel time” as 25 points. The points should not be considered as percentile or deploy any other mathematical interpretations.**
- \* (i) Points will be awarded for the events to decide the best team for the specific event & the best team will be declared Winner for the event category.**
- \* (ii) Points for events sr.no. 5 & 6 in the table above will not be considered for determining the overall “AWIM Jettoy National champion”.**

**Conduct of the Competition :**

1. Points can be acquired in 4 different Performance events, which include Distance, Weight-carrying ability, Accuracy and Longest travelling time to become overall National Champions.
2. Points can also be acquired in Speed event and in Presentation round for securing winning position in individual award category only.
3. Maximum balloon inflation for any event will be a diameter of 8 inches.
4. The Weights that are required to be used for the “Weight-carrying ability” event will consist of 2 or 3 washers as provided in AWIM Kit. The total weight of the washers used for the event should be approx. 32gm ( $\pm 5$ gm). The weights should be stacked & taped in a cylindrical arrangement and should be fastened securely in the Jettoy.
5. Teams will compete to acquire the highest number of total points.
6. Only Test Engineer (2 nos) will be permitted at the starting line, one to operate the pump giving directions and the other to hold and launch the vehicle.

All teams will be given a specific amount of time to complete their 3 attempts per event. Any trials that are not finished during the allotted time will be forfeited.

**DIFFERENT WASHERS TYPES & WEIGHTS AS SUPPLIED IN THE STANDARD JETTOY KIT**