

A  WORLD IN  MOTION<sup>®</sup>

# JetToy Competition

## Event / Track Description & Scoring Guide



**AWIM EEB**  
**SAEINDIA** The Engineering Society  
For Advancing Mobility  
Land Sea Air and Space  
Society of Automotive Engineers **INDIA**

## Distance

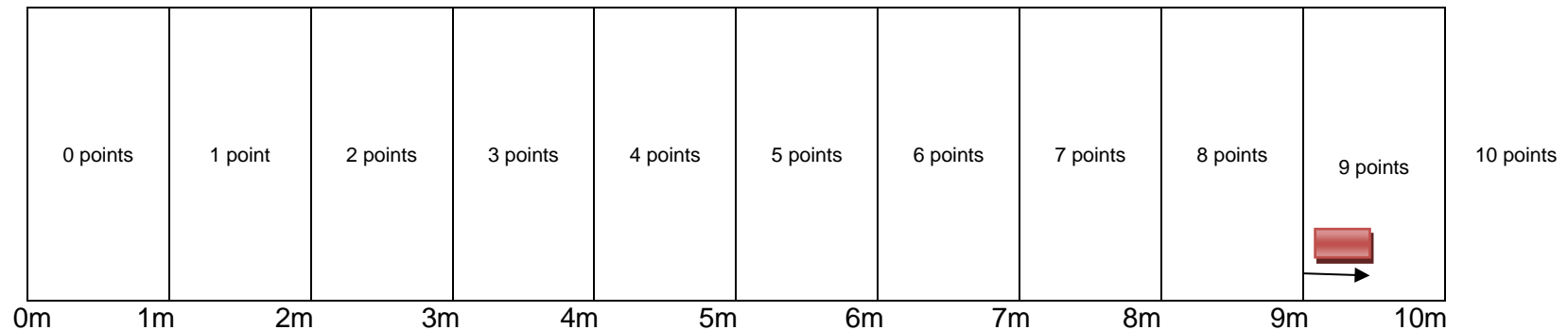
**Objective:** Student design teams will construct a JetToy car that can travel as far as possible.

- Track Specs : The track will be 10m long x 3m wide
- Teams must release JetToy behind the 0m mark
- JetToy must stay on track for attempts to be valid (if JetToy leaves the track, points are rewarded at point of exit)
- JetToy balloon must be inflated to maximum of 8 inch diameter or less. Track Judges will confirm the balloon diameter before JetToy is released.

### Scoring

- ✓ Design teams get three attempts.
- ✓ Final score is based on the average of the 3 attempts.
- ✓ Point total is awarded by judge determining the scoring box and adding the total cm travel in the point box.
- ✓ Measurements are taken from the furthest point of travel (i.e. most distant point), reference car front edge.

### Distance Track –



The JetToy stopped 55cm beyond the 9m line, the point value of this trial is 9.55

## Weight

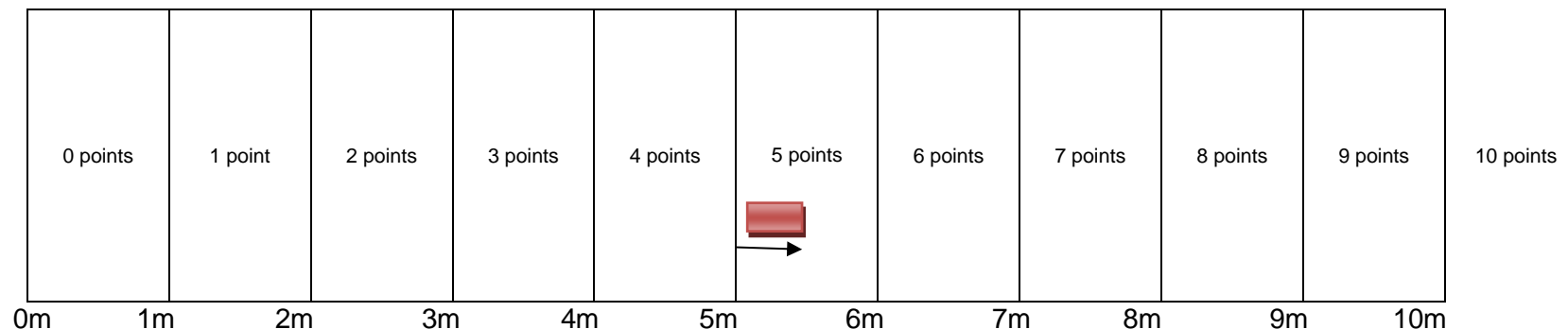
**Objective:** Student design teams will construct a JetToy car that can carry a specific amount of weight.

- Track Specs 10m long x 3m wide
- Teams must release JetToy behind the 0m mark
- JetToy must stay on track for attempt to be valid (if JetToy leaves the track, points are rewarded at point of exit)
- JetToy balloon must be inflated to maximum of 8 inch diameter or less. Track Judges will confirm the balloon diameter before JetToy is released.
- Weights for the 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 will be provided by the Track Judges.

### Scoring

- ✓ Design teams get three attempts.
- ✓ Final score is based on average of the 3 attempts.
- ✓ Point total is awarded by judge determining the scoring box and adding the total cm in the Point Box.
- ✓ Measurements are taken from the furthest point of travel (i.e. most distant point), reference-car front edge.

### Weight Track –



The JetToy stopped 66cm beyond the 5m line, the point value of this trial is 5.66

## Accuracy

**Objective:** Student design teams will construct a JetToy car that can travel a specific distance.

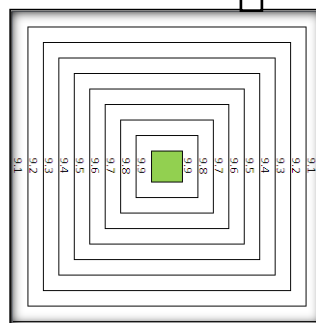
- Track Specs 10m long x 3m wide
- Teams must release JetToy behind the 0m mark
- JetToy must stay on track for attempt to be valid (if JetToy leaves the track, points are rewarded at point of exit)
- JetToy balloon must be inflated to maximum of 8 inch diameter or less.

### Scoring

- ✓ Design teams get three attempts.
- ✓ Final score is based on the average the 3 attempts.
- ✓ Points awarded are by determining the scoring box and **adding/subtracting** the total cm traveled in the Point Box.
- ✓ Measurements are taken from the furthest point of travel (i.e. most distant point), reference-car front edge; if vehicle lands in target square the points are determined by square where 50% + of vehicle stops. Target square begins at 9.1 points; increases by a tenth of a point each 5 cm to center of target at 10 points; decreases by tenths beyond center.

### Accuracy Track

0 points	1 point	3 points	5 points	7 points	8 points	7 points	5 points	3 points	1 point	
0 points	2 points	4 points	6 points	8 points	Target 10 points	8 points	6 points	4 points	2 points	
0 points	1 point	3 points	5 points	7 points	8 points	7 points	5 points	3 points	1 point	
0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m



e.g. Case-I :The JetToy stopped 68cm beyond the 3m line, the point value of this trial is 6.68 (red)

e.g. Case-II :The JetToy stopped 68cm beyond the 8m line, the point value of this trial is 6.32 (violet)

## Speed

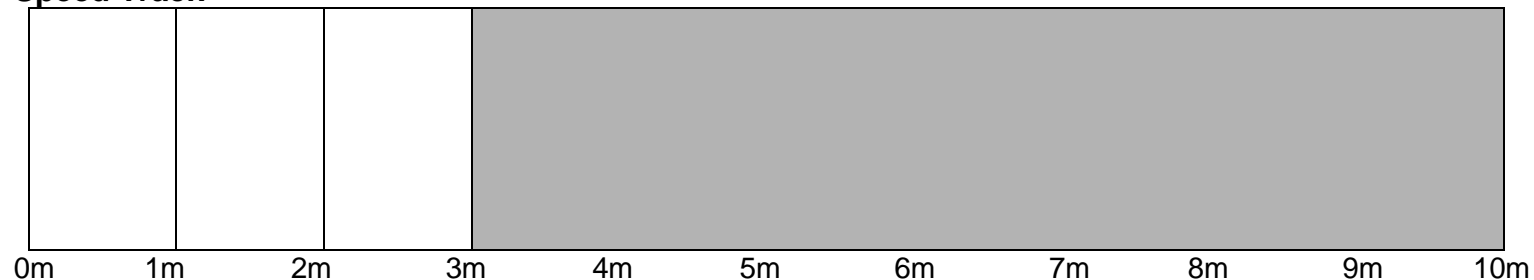
**Objective:** Student design teams will construct a JetToy car that can travel as fast as possible over 3m distance.

- Track Specs 3m long x 3m wide
- Teams must release JetToy behind the 0m mark
- JetToy must stay on track for attempt to be valid.
- JetToy balloon must be inflated to maximum of 8 inch diameter or less. Track Judges will confirm the balloon diameter before JetToy is released.
- Track judge will time the teams attempt using a stopwatch / or by installing appropriate sensors.
  - ✓ Time starts when nozzle is released on the instruction of Judge.
  - ✓ Time stops when JetToy passes the 3m mark (trigger for start/stop points is when the jettoy touches start/end lines)

### Scoring

- ✓ Design teams will run 3 trails
- ✓ Final score is based on the Best of the 3 attempts, in case of sensors the indicated speed will be recorded.

### Speed Track



The JetToy crosses the 3m line with the best time/speed among all participating is declared as category winner

## Longest Travelling Time

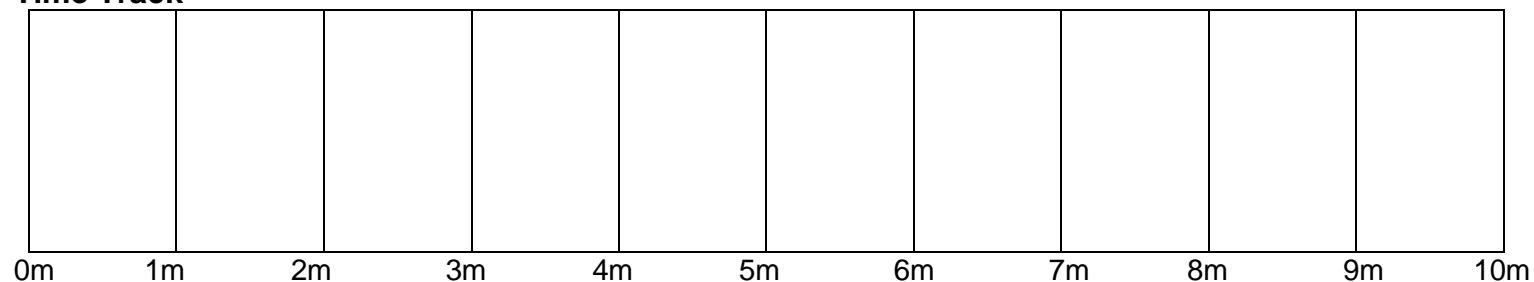
**Objective:** Student design teams will construct a JetToy car that can travel for an extended period of time (longest travel time).

- Track Specs 10m long x 3m wide
- Teams must release JetToy behind the 0m mark
- JetToy must stay on track for attempt to be valid. The Jettoy must be moving and be within the track to clock the maximum points.
- JetToy balloon must be inflated to maximum of 8 inch diameter or less. Track Judges will confirm the balloon diameter before JetToy is released.
- Track judge will time the teams attempt using a stopwatch or using sensors.
  - ✓ Time starts when the Jettoy is released by the test engineer
  - ✓ Time stops when JetToy stops moving forward or leaves the confines of the track.

### Scoring

- ✓ Design teams get three attempts.
- ✓ Final score is based on the average of the 3 attempts.
- ✓ For awarding refer the JetToy Rule Book.

### Time Track



The JetToy stays on track and keeps moving for 15.23 sec., point value of the trial is 15.23.

- **Artistic Design**

- **Objective:**  
Student design teams will construct a Concept toy that is functional and artistically designed.
- **Scoring:**  
Overall competition will be evaluated by Jury panel to designate the JetToy they believe to be the best Artistic Design as well as on the Concept

- **Presentations**

- **Objective:**  
Student design teams will present their JetToy design.
- **Scoring**  
Presentations will be evaluated by a Jury panel for placement.