RIT NXP Car Rules

Rochester Institute of Technology

Kate Gleason College of Engineering

Department of Computer Engineering

2016, 2018

Revision 1.0, 1.2

Table of Contents:

1 TIMED RACE PROCEDURE

1.1 CAR INSPECTION
1. All cars will be inspected prior to racing.
2. All boards must be secured on car. Any loose boards must be removed.
3. All printed mounts must be intact. Cracked, broken, taped mounts are not acceptable. Please get the .stl file from myCourses and go to the Construct and get the re-printed. NOTE: This may take up to 2 hours.
4. All wireless interfaces must be removed.

1.2 RACE PROCEDURE
5. Race order will be determined by a random drawing or team availability.
6. Race track final configuration may change up until the contest starts.
7. When your team is called will have one (1) minute to prepare the car.
    a. Approved Adjustments:
    b. **You may**:
        • Configure parameters via on-board interfaces. (Switches, Knobs, etc.)
        • Alter the angle of your camera.
        • Change batteries.
8. Disallowed Adjustments:
    a. **You may not**:
        • Reprogram your processor.
        • Configure parameters via wired or wireless communications.
9. Before the 2 minute expires you must signal "Ready" to the referee before starting car.
10. After the referee confirms "Ready", the vehicle should leave the starting area within 30 seconds.
11. Teams have THREE attempts to complete ONE lap. The **FIRST** completed time will be recorded.
12. Example:
        • Attempt 1 – Vehicle goes to fast around a curve and goes off track. Time is not recorded.
        • Attempt 2 – Vehicle makes it around track successfully. Time is recorded.

13. After each attempt you have two minutes to make approved (see above) adjustments to vehicle.
14. After the attempts, the team shall return the vehicle to inspection area.
15. Times will be posted after each team races.

2   SCORING

1. Each team will get three chances to run the track

2. Car must complete 1 laps of track for an official time score

3. Best score is counted (see Bonus and Fouls for modifications)

4. Minimum of 2 wheel must be in contact with the track at all times

5. Car must break timer beam for start and also for stop

6. The decision of the judges is final.

7. Good luck!

3 BONUS, FAILURE, DISQUALIFICATION

The rules will be interpreted by NXP and the organizing committee of the event. A Foul, is a minor infraction, which results in time penalties. A Bonus will results in a better time! A Failure will result in the loss of an attempt.

3.1 BONUS
(results in time being subtracted from final. **Subsequent attempts are allowed.**)

1. Any of the following conditions will be considered a bonus and time will be recorded:
   a. Car stops after completing course (1wheel must be on panel with start line) **[-1 second**]

3.2 FAILURE
(results in the current attempt time not being recorded. **Subsequent attempts are allowed.**)

1. Any of the following conditions will be considered a failure and no time will be recorded:

   a) The racing team fails to get prepared for the attempt within the two (2) minutes allotment. Loss of attempt
   b) The player touches the race car after the technical inspection without consent of the referee.
   c) Car must finish within 60 seconds of start of timer.
   d) 2 wheels Car completely leaves track.

3.3 DISQUALIFICATION
(is a major infraction which results **all times not being recorded**)

1. All boards must be secured to chassis
2. Not available during the allotted time slot (11:00AM-1:00PM)