



# RC Racing Rulebook

for **INNOVO-2025** by **SSGMCE**



## ~RC Car Racing Challenge at INNOVO-2025~

Race Against Time, Intelligence and Team Work on the Most Challenging Track!

Do you have the skills to maneuver an RC car through hairpin bends, ladders, tunnels, and surprise obstacles? Test your control and speed in a thrilling race to the finish line!

It is imperative that your vehicle passes the TI (Technical Inspection) to ensure it meets all competition requirements. Racing alone is not enough, and passing the inspection is equally crucial for participation.

### 1. Open Competition:

- This is an open event for anyone interested in showcasing their RC car driving skills, vehicle design, and vehicle tilt control.
- A team must have a minimum of 1 member and a maximum of 3 members, which includes a driver/controller.
- More details regarding the RC race will be given at the location.
- JUDGE'S DECISION WILL BE FINAL.

### 2. RC Vehicle Specification:

- RC vehicle Dimensions should have minimum (200mm L, 150mm B, 150mm H) and maximum (550mm L, 350mm B, 350mm). It must not exceed beyond the given size.
- RC vehicles should have electric engines instead of IC engines.
- The maximum weight limit for an RC is 5KG, while the minimum weight limit is 0.5KG.
- The RC vehicle is operated using a wireless controller, not a wired one.
- It is important to ensure that the wires are appropriately insulated.

- With safety as our top priority, we have set the maximum voltage limit to 24V. This ensures that our equipment runs smoothly and efficiently while keeping you and your surroundings safe.
- If you plan on using any equipment or methods during the event, please make sure to inform the organizers in advance.
- Please note that bringing pre-made toy cars is not permitted.

### 3. The Challenge:

- **First Round will be TI. (50 Points)**

#### **1. Battery Safety:**

- Ensure that the battery used in the RC device complies with safety standards.
- Regularly inspect batteries for any signs of damage or wear.

#### **2. Electronic Components:**

- Regularly check the electronic components for any damage or loose connections.
- Follow proper installation procedures for electronic components

#### **3. Structural Integrity:**

- Inspect the overall structural integrity of the RC device to ensure it is not compromised.
- Pay attention to any signs of wear, cracks, or damage to the frame or body.

#### **4. Radio Frequency Interference (RFI):**

- Ensure that the RC device does not emit excessive radio frequency interference.
- Follow guidelines for operating in designated frequency bands.

#### **5. Compliance with Local Regulations:**

- Be aware of and comply with any local regulations or guidelines regarding the use of RC devices in public spaces.

#### **6. Insurance and Liability:**

- The organizing team will not be held responsible for any damage to the car during the race

#### **7. Emergency Procedures:**

- Establish emergency procedures in case of malfunctions or accidents.
- Have a plan for quickly disabling or grounding the RC device in case of emergencies.

**The vehicle must pass through the TI. If it fails to do so, the team will be disqualified.**

➤ **Acceleration Test: (50 Points)**

**Objective:** Measure the time it takes for an electric RC car to accelerate from a standstill to a designated speed over a 10-meter distance.

**Rules:**

1. It's crucial to remember that while operating your RC vehicle, you should avoid colliding with other vehicles. Not only can collisions cause damage to the vehicles, but it can also result in a negative mark being given. So, let's strive to keep our vehicles safe and prevent any unwanted mishaps.
2. Participants must drive the RC car along the track, completing it as quickly as possible.
3. Trials are not allowed.

➤ **30-meter RC race circuit: (100 Points)**

Given the specific characteristics of the dirt track with hairpin bends, S-shaped curves, bumps, and puddles, you'll want to consider additional rules and guidelines to ensure a fair and exciting race experience. Here are rules for the 30-meter RC race circuit on a dirt track:

**1. Race Duration:**

- Specify the total race duration, considering the shorter track length. Common durations for short tracks range from a few minutes to longer races, depending on the skill level of participants.

**2. Start and Finish Line:**

- Clearly mark the start and finish lines, considering the challenges posed by the track layout.

**3. No Laps, Elapsed Time:**

- Emphasize that the race is a point-to-point format, and participants will be timed for their elapsed time to cover the 30-meter distance on the dirt track.

**4. Timing System:**

- Use a reliable timing system that can accommodate dirt track conditions. The timing system should accurately record participants' elapsed times.

**5. Scoring System:**

- Establish a scoring system based on elapsed time. The participant with the fastest time is the winner.



#### **6. Driver Conduct:**

- Emphasize safe and responsible driving, especially in hairpin bends and curves. Encourage participants to navigate bumps and puddles with care. Penalties for reckless driving should be enforced.

#### **7. Participant Briefing:**

- Conduct a mandatory participant briefing before the race to ensure that all racers are aware of the rules, safety measures, and any specific details about the track layout. This briefing helps maintain a fair and organized race environment.

#### **8. Safety Measures:**

- Mandate the use of safety gear, including appropriate eye protection to shield against dirt and debris. Emphasize adherence to safety guidelines throughout the race.

#### **9. Disqualification for Going Off Track:**

- If a participant's vehicle goes off the track two times during the race, it will result in automatic disqualification. This rule encourages drivers to stay within the designated race course.

#### **10. Inspections:**

- Conduct pre-race inspections to ensure that all vehicles comply with the specified rules, particularly those tailored for dirt track racing. Inspections should focus on aspects relevant to the dirt track conditions, such as tire conditions and suspension setups.

#### **4. Provided Equipment:**

- An AC power supply will be provided for charging the batteries.

#### **5. Bonus Points:**

- The track includes bonus points obtained by crossing certain challenging obstacles.
- Extra credits will be given for those cars with unique design and advanced features.

# **All The Best**