LOST LANDER

Abstract:

Once upon a time in a galaxy far far away there was an alien species that was much more technologically advanced than us Humans. In there quest for knowledge they had explored various planets. When they discovered the Earth they were very excited as the planet could possibly harbor life.

They send a rover to this mysterious planet that would act as a pathfinder for future missions. The lander, however, encounters a problem during atmospheric entry but still manages to land safely. This comes as a major blow to the mission as the camera onboard the rover is now damaged.

Challenge Statement:

The teams are required to design a rover/bot which will be able to complete a given obstacle course and just like real-life scenario the teams would not be able to see neither the obstacle course nor the rover. The rover must be controlled based on the signal it transmits.

Gameplay:

- Each team will start from the same starting point when the timer will begin.
- If the rover/bot gets stuck at any obstacle, topples over, or is just unable to move (for example, the wheels lose contact with the ground), the teams will be allowed a restart. **The timer, however, will not be reset**.
- The timer will stop as soon as the bot crosses the finish line.
- The placement of the obstacles will remain the same for all the teams. However, they will be allowed to see it only after completing the task.

Bot Specifications:

- The dimensions of the bot must be less than or equal to **200mm X 120mm X 100mm.**
- The control mechanism must be **wireless**.
- Teams can use a **microcontroller of their choice** in their rovers.
- Teams are free to use any kind of sensors (ultrasonic, IR, Proximity sensor etc.) in their rover.
- Teams are not supposed to use any readymade assemblies.
- Teams are not allowed to make use of any sort of camera/visual aids on their bots.