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## SUMO RC (3KG - 1KG - 0.5KG) 2024

### 1. Deskripsi

The Sumo RC Robot Competition is a type of robot competition which aims to train robot control and strategy in sumo games, the strongest robot in the arena is declared the winner.

### 2. Participant

- 1) Students in categories at elementary, junior high school, senior high school and open.
  - Sumo RC 3kg : Elementary, junior high school, senior high school, Open Category
  - Sumo RC 1kg : Elementary, junior high school, senior high school
  - Sumo RC 0.5 kg : Elementary, junior high school, senior high school
- 2) Consists of a minimum of 3 students and a maximum of 5 students.
- 3) Fulfill administrative requirements (Registration and Payment)

### 3. Robot

- 1) Each team must have its robot which is only one robot is permitted on the track
- 2) At the time of competition the robot must be in a form that has been assembled and ready to use
- 3) Size Robot and weight :
  - Sumo RC 3kg :
    - Robot size does not exceed 20 cm x 20 cm at idle or initial position.
    - The weight of the robot + battery should not exceed 3 kg (excluding controller).
  - Sumo RC 1kg
    - Robot size does not exceed 15 cm x 15 cm at idle or initial position.
    - The weight of the robot + battery should not exceed 1 kg (excluding controller).
  - Sumo RC 0.5kg
    - Robot size does not exceed 10 cm x 10 cm at idle or initial position.
    - The weight of the robot + battery should not exceed 0.5 kg (excluding controller).
- 4) There is no limit to the robot's height.
- 5) The robot works according to remote control with a 12V dry battery supply with 1V tolerance. Only allowed to use 1pcs battery
- 6) Do not use a power supply of hazardous materials
- 7) Robots must not damage field property
- 8) The robot is not allowed to emit liquid, fire or other things
- 9) Robots must not grip the ground using diaphragms, suction cups, and others
- 10) All types wireless of remote control are permitted.

#### 4. Spesifikasi Lapangan

- 1) Use board MDF (Medium Density Fibreboard) and is coated with a black rubber sheet.

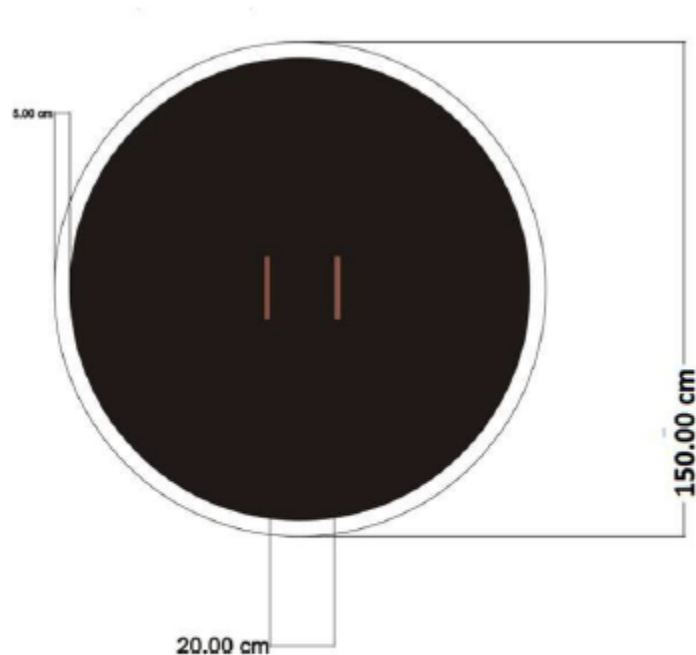


Fig 1. Arena

#### 5. Match Rules

- 1) Before Competition
  - Committee will check several things as follows (robot power supply voltage, robot dimensions, weight, robot ownership/label)
  - If the robot does not comply with the provisions, the team is given 5 minutes to adjust the robot's specifications immediately. If it still does not comply with the specified limits. The team can not following this competition.
  - Each team is required to show and safety equipment (gloves and shoes).
- 2) During Competition
  - Competition uses a point system and a knockout system
  - Starting position of the robot can be anywhere behind the straight line.
  - The game is done with a maximum of 3 rounds.
  - The robot is declared victorious if the opposing robot leaves the field,

- If both robots are both out of the field, then the first robot to leave the field is declared a loser
- The winner of this game is the one who has won 2 rounds
- Robots will be quarantined before the game
- Participants are allowed to only use the same robot during the match.
- If a robot stops/does not move at all for 10 seconds, then the robot is declared defeated (no points).
- If both robots stop, then a rematch will be conducted
- Provide 1 minute SERVICE TIME to prepare the robot before the match starts. It is permissible to replace flexible or identical parts.
- Each team is given 1 time out for 1 minute per match (3 rounds). Time out is done after the game and if a team requests it. Battery replacement is not permitted during time out.

## 6. Scoring

- 1) The robot is declared victorious if the opposing robot leaves the field
- 2) The winner of this game is the one who has won 2 rounds.
- 3) The game is declared a draw if no robot wins within 3 minutes.
- 4) A death match occurs if there is still no winner after 3 rounds.
- 5) If a death match occurs, a rematch will take place until there is a winner

## 7. Violation

- 1) touching the robot during the game is not permitted unless explicitly permitted by the referee.
- 2) The size of the robot does not comply with the specified provisions

**Rules are adopted from various National and International robot competition activities**