

ROBOYUDH'26 RULE BOOK

ROBOSOCCER

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I. INTRODUCTION

In RoboSoccer, two robots go head-to-head in a soccer match, pushing or kicking a tennis ball to score goals against each other. The robots, designed with wedges or other surfaces to push the ball, compete on a wooden soccer field with goalposts. The team that scores the highest goals within the 3-minute round time limit advances to the next stage.

II. ROBOT SPECIFICATIONS

1. **Weight Limit:** 5 kg (with a tolerance of 5%)
2. **Bot Dimensions:** 300 mm x 300 mm x 300 mm (including tires) (with a tolerance of 5%)
3. **Control:** Manual control via wired or wireless remote
4. **Wired:** Minimum 2 meters wire length to ensure slack
5. **Wireless:** At least a 4-frequency remote or two dual control circuits to avoid interference
6. **Power Supply:** Only self-powered, with no off-board power allowed (DC power supply not exceeding 12.6V)
7. **Control:** Only one participant per robot
8. **Gripping:** No gripping mechanisms allowed; the robot can only push the ball
9. **Size of Control Remote:** Remote dimensions are not included in the size restrictions
10. **Sharp Edges:** Not Allowed

Prohibited Mechanisms:

- Liquid projectiles, inflammable liquid
- Invisible damage-causing mechanisms (e.g., electrical weapons, RFID jamming)
- Mechanisms causing entanglement or damage to the opponent
- Convex hull that is outside regulation (at least 50% of the ball must be visible from front of the robot)

III. ARENA SPECS

1. **Arena Dimensions:** 180 cm x 360 cm
2. **Surface:** Plywood base with a green carpeted pitch
3. **Ball:** Standard tennis ball

IV. TICKET REQUIREMENT

1. Each participant is required to purchase a roboyudh26 ticket to compete in the event

V. ROUNDS

1. **Round Time:** 3 minutes per round
2. **Match Format:** Teams compete one-on-one. The robot that scores the highest number of goals within the time limit wins the round and advances to the next round.

VI. RULES AND REGULATIONS

1. Only one participant should control the robot throughout the match; no player exchanges are allowed.
2. Human interference, such as touching the robot, is strictly prohibited during the game.
3. Robots can push or hit the ball, but they cannot withhold or grab it.
4. If the game needs to be paused, penalties will apply if the pause lasts longer than one minute.
5. The robot must not emit infrared light, although optical sensors (e.g., infrared-distance-sensors) may be used as long as they don't interfere with other robots.
6. In case of accidental gripping of an opponent's robot, the match will be paused, and the timer will be halted until the issue is resolved. The match will resume from the same position once the issue is addressed.
7. Balls staying in the corner of the arena for 10 seconds will be repositioned to the center after a short pause of 3 seconds.

Rules subject to change by head coordinator

VII. MARKING SCHEME / CRITERIA

1. **Goal Scoring:** The robot that scores the most goals wins the match.
2. **Design Compliance:** Robots must adhere to all design specifications, and failure to comply may result in disqualification.

VIII. PENALTIES

1. **Time Penalty:** If the match exceeds a 1-minute pause, penalties will be applied.
2. **Disqualification:** Failure to comply with the robot specifications (e.g., using illegal mechanisms) will lead to immediate disqualification.

IX. DISQUALIFICATION

1. Robots that utilize illegal mechanisms, such as gripping devices will be disqualified immediately.
2. Any failure to adhere to the robot size and power supply specifications may lead to disqualification.

X. SAFETY GUIDELINES

1. Participants must ensure that their robots are designed safely to avoid any damage to the arena or harm to other participants.
2. Robots emitting infrared light or using electrical weapons that cause interference will not be allowed.
3. Any accidental robot entanglement will result in a temporary pause, but the safety of participants will always be prioritized.

APPEALS AND DISPUTES

1. All decisions made by the organizers and judges are final and binding.
 2. No rematches will be provided due to wireless system interference or any other disputes.
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