

**GUIDE BOOK**



**WIRC**

**ROBOT  
SOCCER RC**



## GAME DESCRIPTION

This is a ball game using robots (on wheels) controlled by remote control via wireless/Bluetooth communication. Each team competes to score as many goals as possible in the opposing team's goal within a set time limit. Each participant prepares their robots to specific specifications.

## PARTICIPANT TERMS AND CONDITIONS

- The competition is open to participants from Indonesia and the Indonesian Foreign participants through the following categories :
  1. Junior Category [age of Under 12 years old]
  2. Senior / Open Category [age of under 19 years old]
- Each team consists of a maximum of 7 participants including. Each participant (except assistant teacher/team manager) is only allowed to register join a team only.
- Team registration must be done online at the website.
- Eating & drinking are not provided.
- The Robot Kit is not provided by the committee
- Participants are given the opportunity to repair or replace batteries during the summons (in the waiting area for the match) before the match begins.
- Coaches/mentors are prohibited from entering the match arena.
- Participants are not permitted to share/lend robots.
- Battery changes are not permitted between rounds.
- Participants must arrive on time. Failure to appear after three summons will result in disqualification.
- It is prohibited to engage in actions or convey information that could arouse negative emotions, create conflict, use harsh language, incite individuals or groups to act outside the boundaries of applicable norms and rules, engage in bullying, discrimination based on ethnicity, religion, race, and intergroup relations (SARA), or other forms of intimidation that are detrimental to individuals or groups.



## ROBOT RULE

### ROBOT SOCCER RC

#### Robot Specifications.

- Robot Size: Maximum 20cm x 20cm x 20cm
- Robot Weight: Maximum 1 kg (excluding remote control)
- Battery Power: Maximum 13 Volts
- Control System: Uses remote control, any additional automatic systems/sensor components.
- Motor: Robots can use a maximum of 3 motors (DC motors, servos, solenoids, etc.).
- Identification: Robots on a team must be the same color or have the same markings (stickers, etc.).
- Ball Kicker: Each robot is allowed to have a safe and controlled ball kicking mechanism.
- Ball Hole: The maximum depth of the ball-retaining hole is 3 cm.
- Control System: Uses remote control (no additional automatic systems/sensor components (such as distance sensors, line sensors, orientation sensors, etc.) are allowed. In other words, the robot is fully remote-controlled.)

#### Note:

1. Do not use hazardous materials.
2. Do not intentionally damage the field or the opponent's robot.
3. Do not use bases/mechanisms that can hide/hold the ball.
4. Do not attach adhesive to the robot to hold the ball.
5. Do not use bases/mechanisms that can stick to the surface of the competition area.
6. Do not interfere with the opponent's remote control controller / communication by using a signal jammer.

#### Match Arena Specifications:

1. Size: 160 x 244
2. Arena Material: Multiplex coated with flexi material
3. Arena Wall Material: Multiplex doublemin with a height of 12 cm
4. Ball: Golf ball with a diameter of 4.2 cm

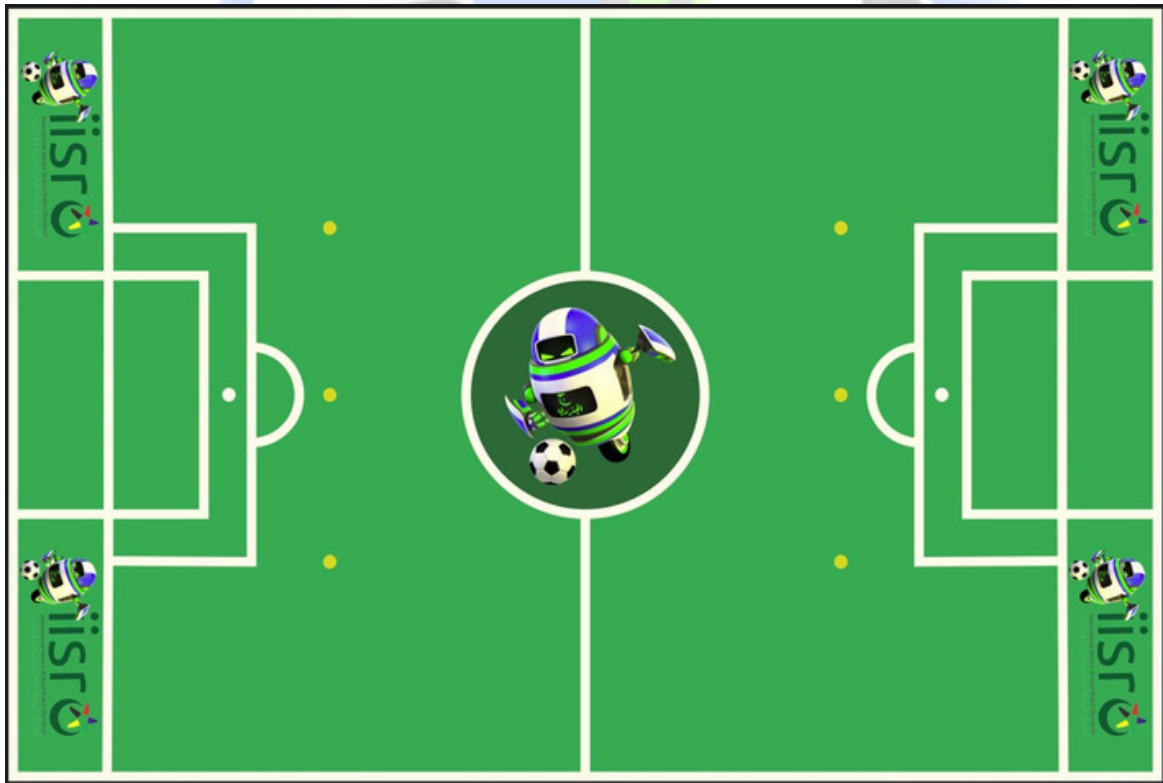




Soccer Field Image:

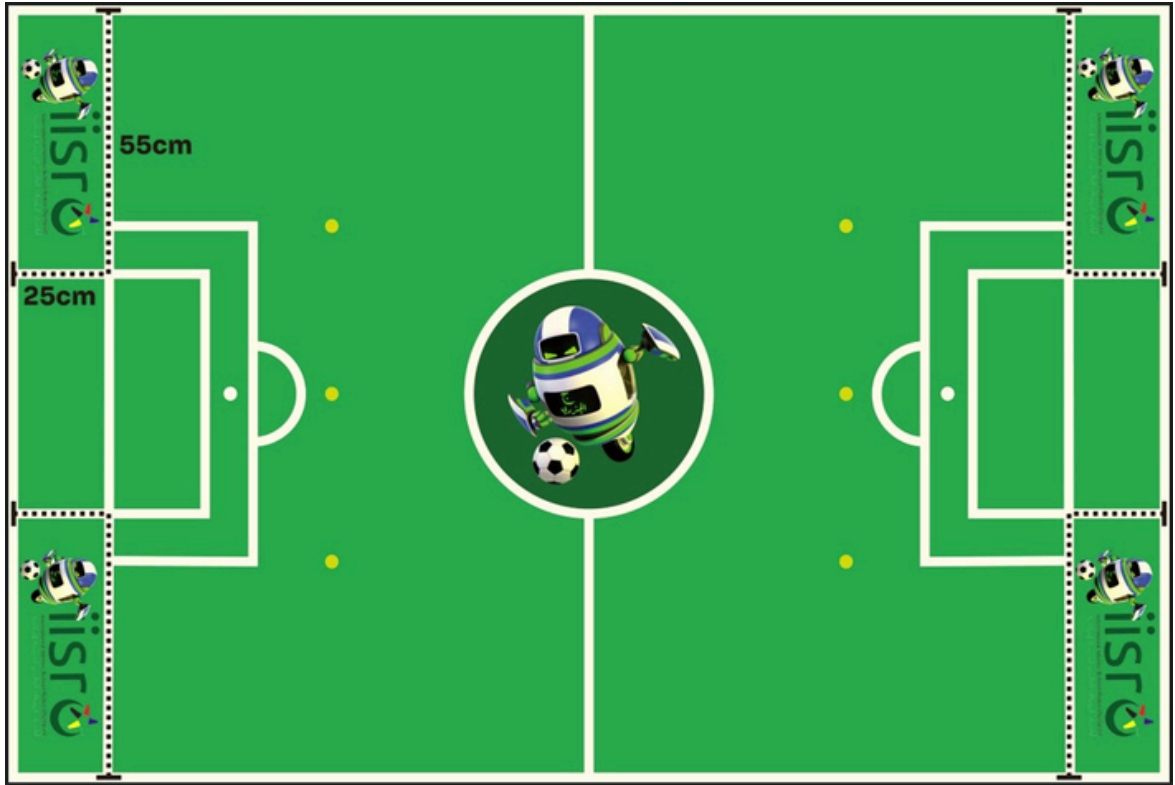
244 cm

160 cm



244 cm

160 cm



## MATCH SYSTEM.

### Knockout System

**Number of Robots:** 2 vs. 2

**Time:** 2 x 3 minutes

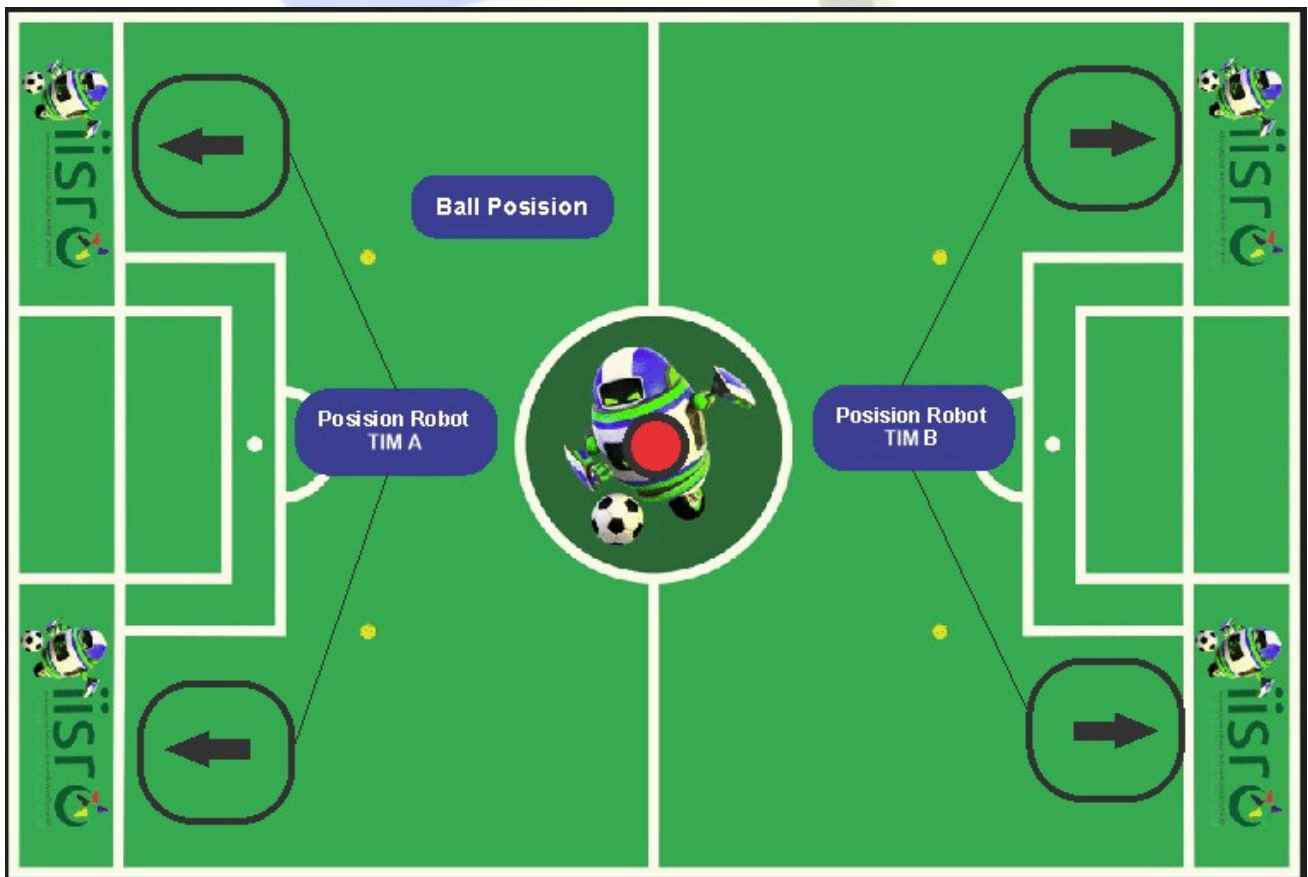
**Time-out:** Each team will be given one 30-second time-out opportunity per half.

1. Participants request it directly by saying "TIME-OUT" to the referee.
2. The match will be stopped by the referee if any participant requests a time-out.
3. The match will start from the kick-off.

Once the time-out opportunity has been used, the match will continue.

**Time-out requests will not be permitted by the referee if the ball is within the goal line.**

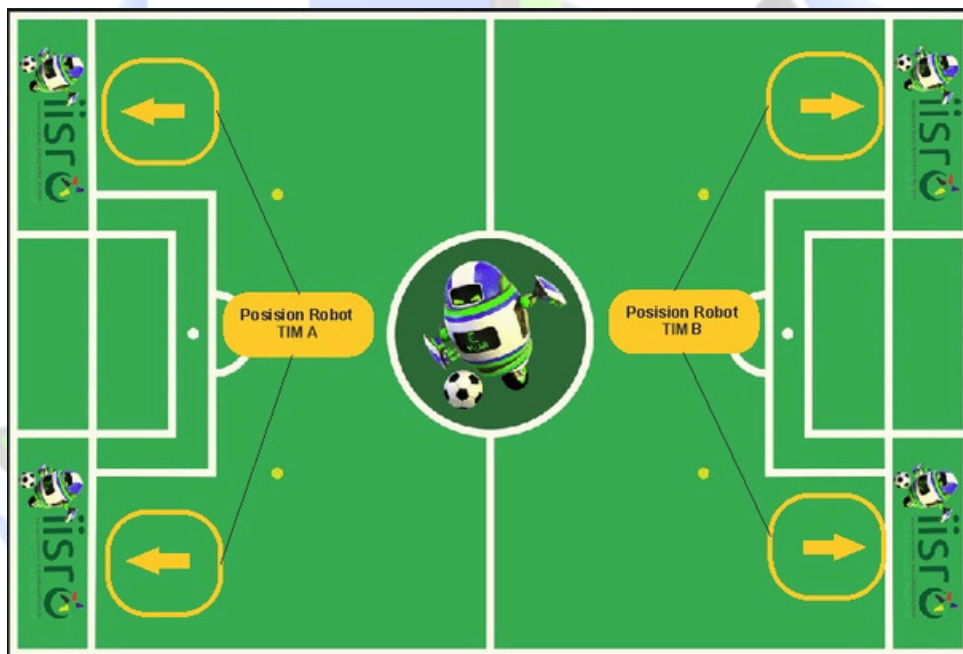
**Starting Position of Ball and Robot:** At Kick-Off, the ball is placed in the center of the arena, and all robots are positioned on the left and right sides of the goal, facing away from the ball.



## Condition of the Robots and Ball during the match:

1. If all Robots or the Ball are stuck/unmoved for 5 seconds, the match will be stopped and the Kick-Off will be repeated.
2. If point (1) occurs within the goal line, the match will be stopped. The Robots' positions will remain unchanged and the ball will be moved to a point parallel to the ball's position on the goal line.
3. Other conditions outside of points 1 and 2:
  - The robot is not moving when it is turned off.
  - The robot is not connected to the remote control (lost connection).
  - The robot component is detached.

In these conditions, the match will continue, and the participant may remove the robot for repair with the judge's permission. The robot will return to the field at its starting position (the robot's point at the kick-off).



- An upside-down robot cannot move. In this situation, the competition will continue, and the contestant must return the robot to its original position in the same place and direction with the judge's permission.

## VIOLATIONS:

1. Remaining in the goal area without the ball within the goal line for 5 seconds will result in a warning.
2. Touching the ball or robot during the match will result in a warning and a penalty at the third penalty point.

If a participant receives three warnings, their robot will be ejected from the match.



## **Terms and Conditions for Robot Positioning During a Penalty Kick:**

The ball will be positioned at the third penalty spot, with the robot sideways (the participant can adjust the robot's position), and the robot can only be moved by pressing one button.

The robot, other than the kicker, will be positioned behind the center line of the field, with the participant able to adjust the robot's position.

## ***Sudden Death***

- This applies when the score is tied.
- 1 minute of added time is added in this round.
- Time ends immediately if one team scores the first goal.
- The team that scores first automatically wins.
- If the score is still tied, a penalty shootout will be decided.

## ***Penalty Shootout***

- This applies when the score is still tied at sudden death.
- A penalty kick 1-on-1 is taken by each team.
- The ball will be placed on the first penalty spot, with the robot facing sideways (participants can adjust the robot's position), and the robot can only be moved by pressing one button.

