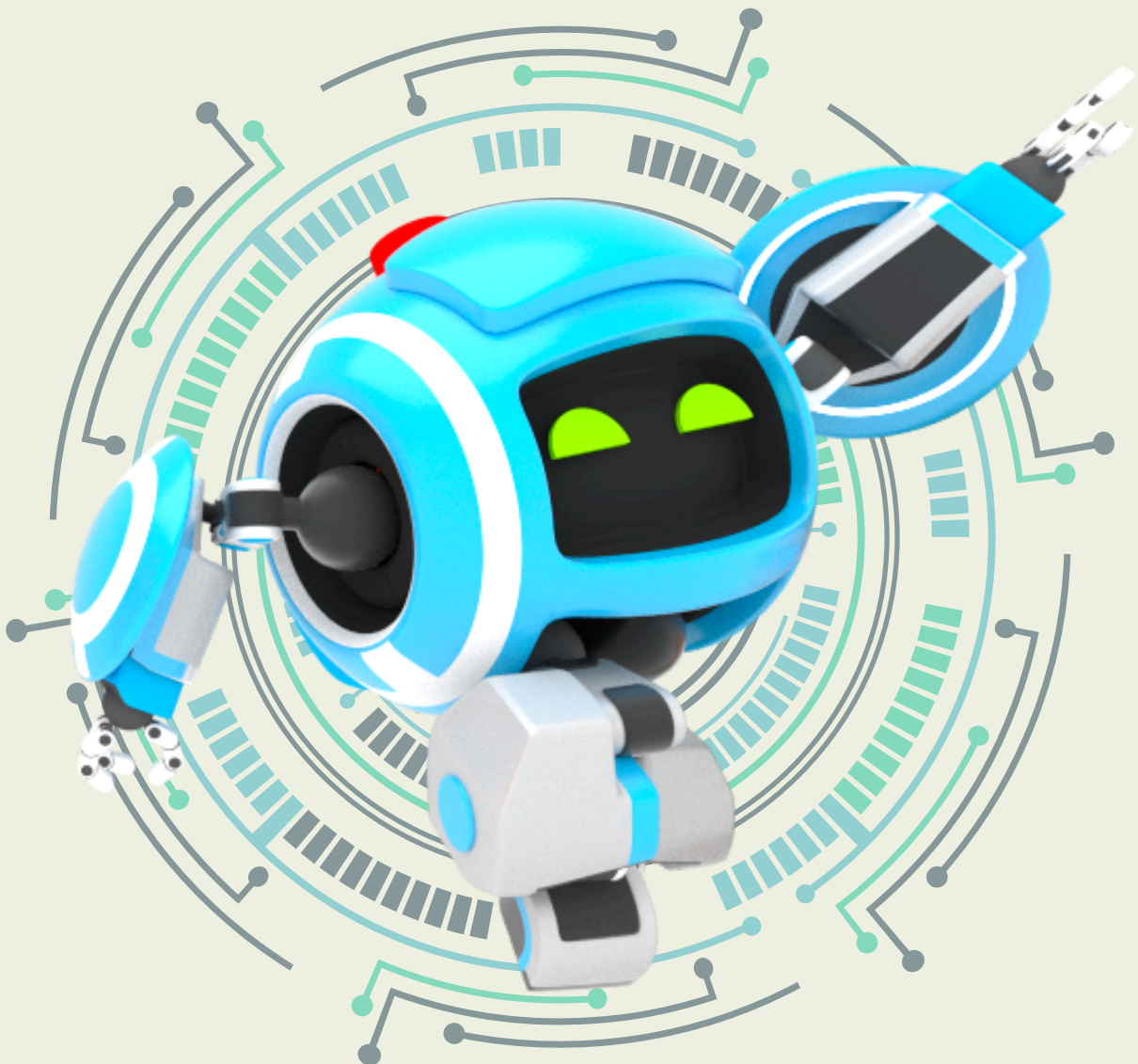


**GUIDE BOOK**



# ROBOT SOCCER AUTO



## GAME DESCRIPTION

The Robot Soccer Auto Competition is an automated robot competition consisting of two teams of robots playing soccer against each other. Each team has two robots. The goal is to score goals against their opponents.

## 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]
  3. First Step [age of Under 12 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

## ROBOT RULE

### Robot Specifications.

- Each team will have two robots competing. Substitutions are prohibited during the competition, either within a team or with other teams.
- The robot dimensions are as follows:

Size / Diameter	22 cm
Height	22 cm
Weight	1100 gram
Ball capture area	3 cm
Voltage	12 Volt $\pm$ 10%



- Robots may not be controlled using any form of remote control. Robots must be started and stopped manually by a human and controlled independently.
- Robots are not permitted to use any communication during gameplay except for communication between two robots.
- All robots must have a stable and visible handle for holding and lifting. The handle must be easily accessible and allow the robot to be lifted at least 5 cm above the highest structure.
- The handle dimensions can exceed the 22 cm height limit, but any portion of the handle beyond this 22 cm limit cannot be used to mount robot components.
- The robot must respond to the ball with a forward motion directly toward it. For example, it is not enough to simply move left and right in front of its own goal; it must also move directly toward the ball in a forward motion.

## CONTROL

The use of remote control of any kind is not allowed during the match. Robots must be started manually by humans and be controlled autonomously.

## COMMUNICATION

Robots are not allowed to use any kind of communication during game play unless the communication *between* two robots is via Bluetooth class 2 or class 3 (range shorter than 20 meters) or via ZigBee. Teams are responsible for their communication. The availability of frequencies cannot be guaranteed.

## BALL

- **General ball specification**

A well-balanced electronic ball shall be used. The ball will emit infrared (IR) light set to pulsed mode.

- **Official suppliers for pulsed balls**

Currently, there is one ball that has been approved by the IISRO 2025 Soccer Technical Committee

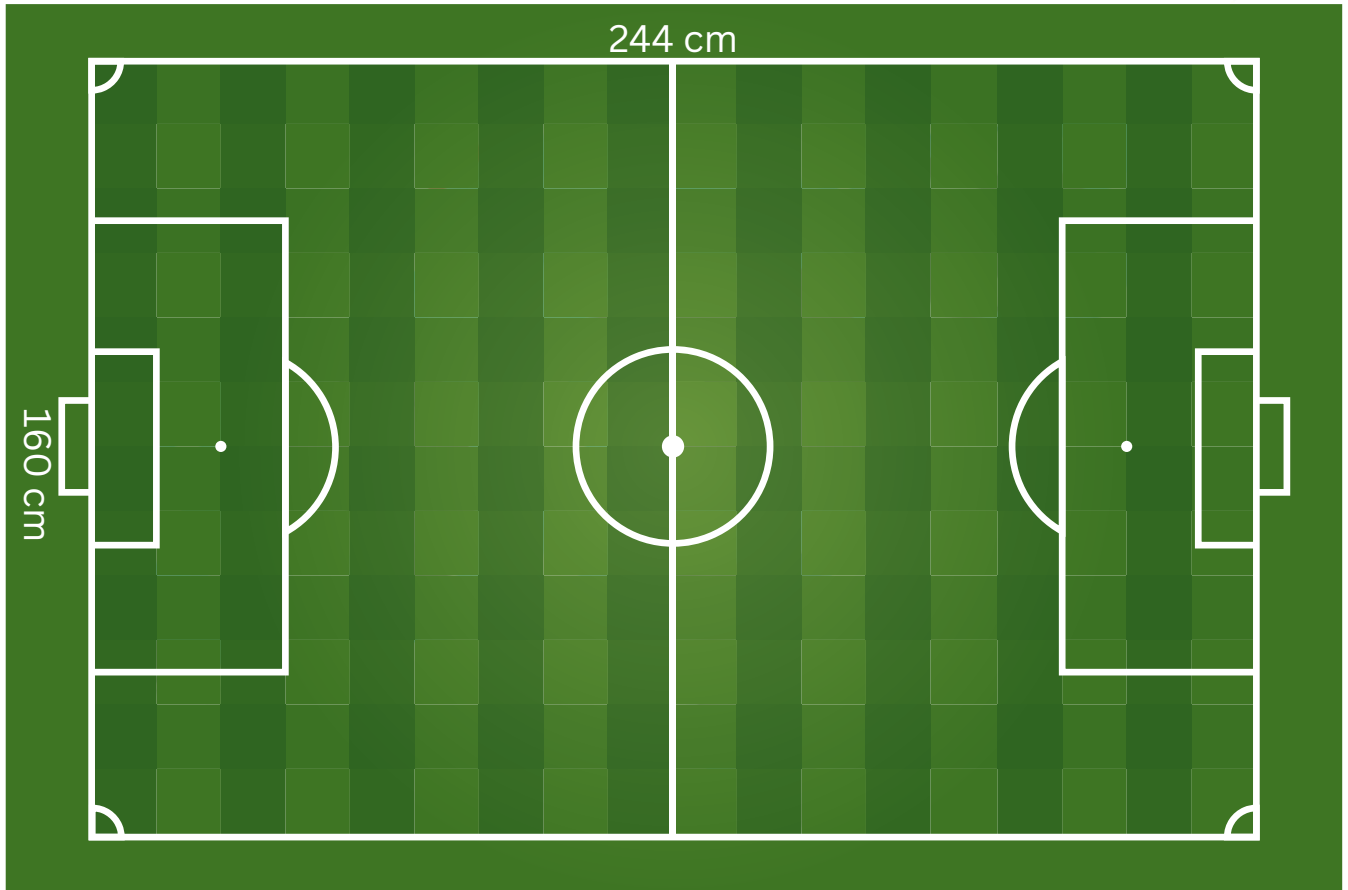
- **Tournament balls**

Balls for the tournament must be made available by the organizers. Organizers are not responsible for providing balls for practice.



## FIELD SPECIFICATIONS

- The field measures 160 cm x 244 cm. The field is marked by white lines that form part of the playing field. Outside the white lines, there is a 25 cm wide outer area around the field.
- Walls are placed around the field, including behind the goals and the outer area. These walls are 22 cm high and painted black.
- The field has two goals, located on each side of the field.



## MATCH SYSTEM.

- 1.The match will be played in two halves (each half lasting 4 minutes).
- 2.The kick-off will be conducted with the ball at the center of the field and the robot outside the goal line.
- 3.If the ball is locked during a fight, the referee will count 5 and stop the match. The match will begin at the kick-off position.
- 4.While defending, the robot is not allowed to remain behind the goal line without carrying/holding the ball for more than 5 counts.
- 5.The winner will be determined by the highest number of goals scored.
- 6.Points scored: a win = 3 points, a draw = 1 point, and a loss = 0 points.

## RETRY AND ROBOT REPAIR.

- 1.If a robot experiences problems during the match, team members may request a retry from the referee.
- 2.Participants are free to make repairs to their problematic robots.
- 3.Repairs must be carried out off the field, and the match will continue.
- 4.Once repairs have been completed, robots may only enter the field when the ball is dead, and permission from the referee is required.

## DISQUALIFICATION

Teams will be disqualified if:

- Participants touch the robots
- Robots do not have the allowed specification

