SOCCER AUTO
2025

1) Description

The Auto Robot Soccer 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 a goal against the opposing team.

2) Participant

1) Students in categories at elementary, junior high school, and 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 two robot permitted on the track.
2) Robot Dimension

Size / diameter	22 cm
Height	22 cm
Weight	1100g
Ball Capturing Zone	3 cm
Battery	12v toleransi 10%

3) Robots must not be controlled by any form of remote control. Robots must be started and stopped manually by a human and controlled autonomously.
4) Robots are not allowed to use any communication during gameplay unless Communication between two robots is done via Bluetooth class 2 or class 3.6 or through other devices that communicate using the 802.15.4 protocol (e.g., ZigBee and XBee). Teams are responsible for their communication. Frequency availability cannot be guaranteed.
5) All robots must have a stable, 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.
6) The handle dimensions can exceed the height limit of 22 cm, but the handle parts that exceed this 22 cm limit cannot be used to install robot components.
7) The robot must respond to the ball with a forward movement directly toward it. For example, it's 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.

4) Spesifikasi Lapangan

1) The size of the field is 120 cm x 240 cm. The field is marked with white lines which are part of the playing field. Around the playing field, outside the white lines, there is an outer area 25 cm wide
2) Walls are placed all around the pitch, including behind the goals and outside areas. The height of the wall is 20 cm.
3) The field has two goals, centered on each of the shorter sides of the playing field. The space in the goal is 40 cm wide, 10 cm high and 80 mm deep, in the shape of a box. one goal is yellow, the other goal is blue.
4) The center circle will be drawn on the field. The diameter is 40 cm. It is a thin black marking line. It is there for the Referee and Captain as a guide during kick-off.

5) Ball Specification

1) The ball emits infra-red (IR) light of wavelengths in the range 920nm - 960nm, pulse data square-wave carrier frequency of 40 KHz. The ball should have enough ultra-bright, wide angle LEDs to minimize unevenness of the IR output.
2) The ball used operates in MODE A (pulsed) and is made by EK Japan/Elekit (https://elekit.co.jp). Also known as the RCJ-05.

6) 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.

2) Sesi Perlombaan
   - The competition uses a points system and a knockout system.
   - The robot's starting position can be anywhere behind the circle.
   - The game is played with a maximum of 3 rounds.

7) Scoring

1) The robot is declared to have won if the robot enters more balls than the opponent.

8) 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

Rule di adopsi dari berbagai kegiatan lomba robot Nasional dan Internasional