

In between group matches

FOOTBOT COMPETITION RULES



1. Introduction

This document summarizes the rules for the "FootBot" robot competition.

2. Description of the Competition

Each robot can have one operator and up to four assistants (maximum of 5 team members). However, during the match, only one operator is allowed to control the robot. The goal of the competition is to score as many goals as possible against the opposing team.

2.1. Fixture

The competition format will be determined by the organizers based on the number of participants. Groups consisting of four alliances each will be formed, and each group will play matches within itself. The group winners will then proceed to the quarterfinals, semifinals, and finals.

2.2. Alliances

An alliance consists of 2 or 3 teams, depending on the number of participants. Each team is allowed to compete with only one robot. During each match, two opposing alliances will compete. When referring to an alliance during a match, the registered alliance name will be used instead of the individual team names. Coaches must ensure their teams know their alliance names. If a team does not show up on match day, the alliance will compete with the remaining teams. If two teams from the same alliance cannot participate, the remaining team in the alliance will compete without replacements. If an alliance is disqualified for any reason, the opposing alliance will be declared the winner by default at that stage of the competition.

2.3. Classification and Rating

The Fibonacci International Robot Olympiad carefully classifies and grades FootBot competitions by considering the participants' education levels and age groups. Competitions are divided into two main categories:

- The first group consists of primary school (ages 6–10) and middle school (ages 10–14) students, aged 6–14.
- The second group includes high school students aged 14–18.

The age group and education level of the team is determined by the age or education level of the oldest member of the team. It is the responsibility of the team mentor to ensure that teams are registered in the correct age category. If during the competition it is determined that the team is registered in the wrong age category, the robot of this team will be disqualified from the competition.

Note: Teams in the younger age group are allowed to compete in the older age group. The organizers reserve the right to check the age of contestants during the competition. In case of violation, the robot of the team that violated the rules will be **disqualified**.



3. Competition Field Description

The field is rectangular and measures 236 x 114 cm (Lego Competition Table). The play area is 190 x 98 cm. The dimensions of the goals are: length: 40 cm, height: 15 cm, depth: 10 cm. For the safety of the robots, the field is surrounded by a 2.5 cm-thick black frame. The surface is green and made of tarpaulin.

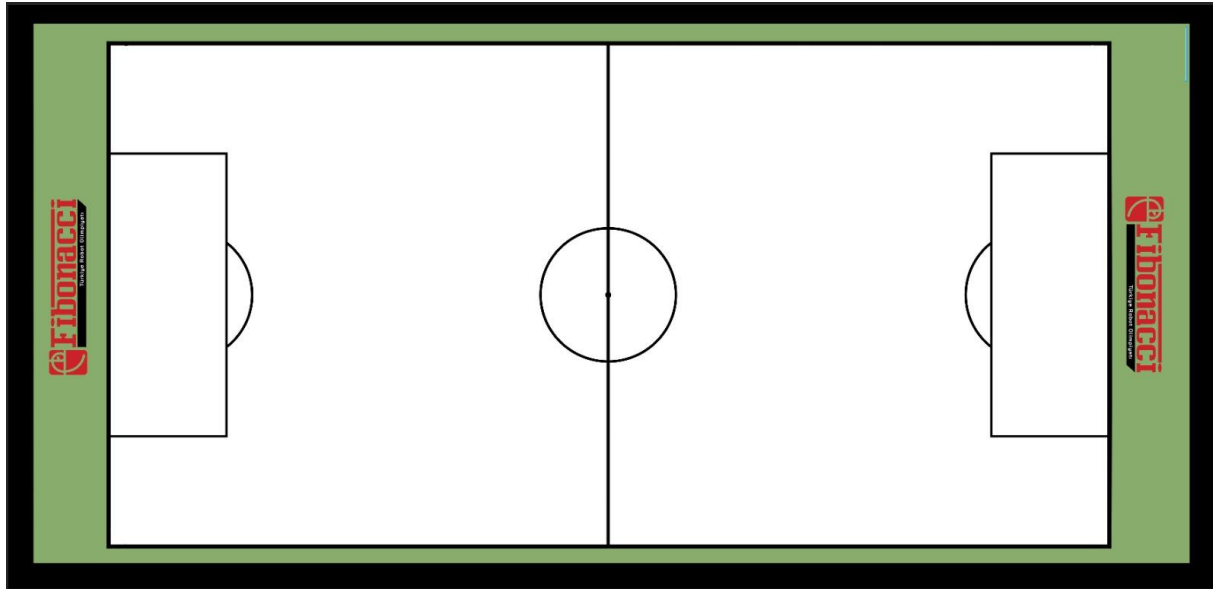


Figure 2. Field View

4. Robot

- The FootBot Player must be controlled remotely using a program created on a computer or laptop.
- Remote controls are only allowed if they are programmed specifically to connect with the FootBot Player. Pre-programmed remote control applications not developed by the team are prohibited.
- If your remote control connects to the FootBot Player via Wi-Fi, keep in mind that the stadium network will be reserved exclusively for referees and the organizing team during the competition.
- You can connect to the FootBot Player via Bluetooth and control it with a smartphone. If Bluetooth is used, the connection name must be unique to avoid confusion with other robots on the field. These settings must be finalized and demonstrated during the initial technical check before the competition.
- The maximum dimensions for the FootBot Player are 20 cm in width and 20 cm in length.



- To verify compliance with the listed specifications, the FootBot Player will be weighed and must fit comfortably into the inspection box.
- The inspection box dimensions are 20 x 20 cm with a tolerance of plus 2 mm.

Class	Weight	Length*	Width*	Height*
FootBot	700 gr	20 cm	20 cm	25 cm

Table 1: Size and Weight Limitations

- The FootBot Player must be placed in the box without applying pressure.
- The FootBot Player must not damage the field or pose any threat to spectators.
- The FootBot Player may have a shooting mechanism that can move in one direction on one side only. The mechanism can extend up to 5 cm beyond the main body limit but must return to the main body limit after the shot.
- Each FootBot Player is limited to 4 motors and 1 microcontroller.
- The FootBot Player must have a start and stop button.
- The maximum weight of the robot is 700 grams.
- A standard table tennis ball will be used as the football.

4.1. Robot Brand Restrictions And Leagues

Robots may only be constructed from mBot or LEGO brand products. These two brands will compete in separate leagues:

- LEGO League: Robots must use only LEGO parts and accessories.
- mBot League: Robots must use only mBot parts and accessories.

Teams may only use robots from their respective brand, and each brand competes exclusively against teams using the same products.

4.2. Initial Technical Check

- The initial technical check will be conducted at a time and place determined by the organizers on competition day.
- The technical check will verify the robot and controller's compliance with the described conditions. Robots that fail to meet the specifications will not be allowed to compete and will be automatically disqualified.
- Teams that miss the initial inspection will be automatically disqualified from the match.
- An additional technical check will be conducted by an assistant referee before each match.



5. Match Rules

5.1. Match Duration

Each match consists of two halves, each lasting 2 minutes, with a 1-minute halftime break for teams to adjust their robot.

5.2. Match Preparation

Before the match starts, the ball is placed on the center kick point. FootBot players must be somewhere in the penalty area of their own side of the pitch. The match starts with the referee's whistle. All FootBot players must start moving after the referee's whistle. When a goal is scored, the ball is placed back on the center field by the referee without stopping the clock and is released again for both teams. The match continues uninterrupted until the end of the 5 minutes.

5.3. Scoring Rules

A goal is scored when the ball completely crosses the goal line.

- 3 points will be awarded for each win.
- 1 point will be awarded for each draw.
- 0 points will be awarded for each loss.

The robot with the most points from each Group will advance to the quarterfinals. If 2 or more alliances have the same points, the alliance with the most goals in all Group matches will advance to the quarterfinals.

5.4 Quarter Finals, Semi Finals and Final Matches

The team with the most goals advances to the next stage. If there is a draw, 2 minutes of extra time are given for the "Golden Goal". The team that scores the first goal advances to the next stage. If neither team scores, a penalty shootout will be held. Each team will be given the opportunity to take 3 penalties. The alliance that scores the most goals advances to the next stage.

For the penalty shootout, each team takes 3 penalties in turn: The ball is placed on the central white spot by the referee and each FootBot Player takes turns to move towards the ball and shoots at the empty goal. The robots' wheels are not allowed to touch or cross the center line. Therefore, players must brake in time. Otherwise, their penalties will be cancelled and counted as 0 (zero).

5.5. Technician Change

In between matches, any team can change the technician controlling the FootBot Player.



5.6. Playing of Matches

At the start of the match, the ball is placed at the starting point in the centre of the pitch. All FootBot Players must be behind the white line of the defensive area. The match starts with the referee's whistle. All FootBot Players must take action after the referee's whistle. When a team scores a goal, the referee places the ball in the centre of the pitch without stopping the clock and both alliances are given free time again. The match continues uninterrupted until the end of the 5 minutes. If there is a FootBot Player on the starting point at that moment, the ball is placed as close to the target as possible but not directly in front of the robot that is there. The referee places the ball at the intersection of the centre line diagonally across the pitch to the right or left, so that no FootBot Player is given an advantage. If the FootBot Players get stuck together, the referee can separate them by moving them as little as possible. If a FootBot Player is caught trying to get the ball from behind an opposing FootBot Player, the referee will blow the whistle for "unfair marking". After the whistle, the ball is placed in the centre of the pitch and the game continues without stopping the clock. If a goal is scored due to a push, the goal will be disallowed.

If the referee detects that any FootBot Player has deliberately attempted to harm an opponent, the referee will whistle a "red card". In this case, the FootBot Player who committed the foul will be deemed to have conceded 1 goal. The referee will place the ball in the centre of the pitch and the match will continue in the position where the FootBot Players were when the referee blew the "red card". Technicians may not touch the FootBot Players during the match without the referee's permission.

If the ball goes out of bounds behind the goalposts, the referee will place the ball back at the starting point in the centre of the pitch. If there is a FootBot Player on the target at the time, the ball will be placed as close to the target as possible, but not directly in front of the robot. The referee will place the ball at the point where the centre line intersects the pitch diagonally to the right or left, so that no FootBot Player is given an advantage.

A defending FootBot Player is prohibited from deliberately standing in front of their own goal or moving parallel to the goal line for more than 3 seconds. If the referee determines that the ball was prevented from going into the goal in this way, the FootBot Player will be deemed to have conceded 1 goal.

The referees' decisions are final. These decisions can only be appealed to the Head Referees. Appealing the Head Referees' final decisions may result in a team or alliance being disqualified.



5.7. FootBot Player Injury

A FootBot player is considered injured by the referee if:

- They are disassembled,
- They are immobile (disconnected from their laptop, controller or tablet),
- The injured FootBot player remains off the field until repairs are completed. They will return to the match once the referee has given permission. The returning FootBot player will be placed in the corner of the defensive area, either to the right or left, depending on the players' preference.

5.8. Shooting-Ball Control

- A FootBot Player must not hold the ball in any way.
- The ball must not pass more than 2cm inside the body of a FootBot Player.
- A FootBot Player is prohibited from attempting to retrieve the ball by placing it on their body.
- A FootBot Player is prohibited from attempting to retrieve the ball by placing it under their body.

If the referee detects that the ball is jammed in any way, they will place the ball back in the centre of the pitch and remove the FootBot Player from there. If the jamming occurs again, it will be considered intentional and the FootBot Player will forfeit the match (3-0).

The referee will place the ball back in the centre of the pitch when:

- The match starts.
- A goal is scored.
- The referee blows a "red card" to a FootBot Player.
- A FootBot Player jams the ball as described above.
- The ball has completely crossed the end line parallel to the goal lines.



5.9. Permissions and Prohibitions

Allowed:

- Clean the FootBot Player wheels only with wet cleaning cloths or cleaning fluid and paper.

Prohibited:

- Use of parts by FootBot Players that could harm teammates.
- Use of adhesives to increase adhesion (cleaning the wheels with adhesive tapes may leave adhesive on the wheels or suction cups). The tires and other parts of the FootBot Player that come into contact with the track must not be able to lift and hold a standard A4 paper (80 g/m²) for more than two seconds.
- Autonomous or remote controlled expansion of your FootBot after the match has started, especially the intentional use of the shooting mechanism for this purpose.
- Use of pneumatics in all robot categories.
- Use of retraction motors in all robot classes.
- Situations specified in the rules listed above.

5.10. Team disqualification conditions

In any of the following cases, a team will be disqualified from the competition and will be forced to withdraw from the competition. The results of the disqualified team will be considered invalid and will not be included in the competition results list:

- Robot Non-Compliance: If the Robot Footballer of the team does not comply with the conditions specified in the sport rules and the team refuses to correct the non-compliance.
- Technician Behavior: If any Robot Footballer's technician behaves in an inappropriate or disrespectful manner; swears, provokes, verbally or physically attacks teammates or referees.
- Coach Behavior: If even one of the team's coaches behaves in an inappropriate or aggressive manner; swears at, provokes or verbally or physically attacks other teams, teammates or referees.
- Violation of the Rules: If any other situation specified in the sport rules occurs.



4. 6. Objections

Referees' decisions are final and not subject to subsequent review. Complaints must be made during or immediately after the match. If a resolution cannot be reached with the referee, claims must be submitted immediately to the Fibonacci International Robot Olympiad Head Referee. Complaints made after this point will not be accepted. In case of disagreement or dispute, the final decision will be made by the referees and/or organizers.

Note: Rude behavior will not be tolerated and a team that does not respect the decisions of the referees/head referees may be disqualified by the head referee and/or event organisers.

6.1 Competitors **cannot raise objections due to field elements after the round has started** . These factors are eliminated by the referees with warnings made before the round.

6.2 The competitor may make a verbal objection to the referee for the result of a round after that round. When the next round begins, the contestant loses the right to verbal protest.

6.2.1 The contestant may present the evidence he/she has to the referee within the scope of the objection. The referee can decide according to his own logic when there is a situation outside the rules.

6.2.2 Contestant; After the competition is over, the person can submit a written objection to the verbal objection decision until the next elimination draws are announced. This objection must be written and submitted to the Chief Referee in the form of a petition.

6.2.3 The Chief Referee makes final decisions on appeals. Decisions cannot be appealed again.

6.3 Competitors who do not comply with the referees' warnings or disrupt the course of the competition will be disqualified.

6.4 Fibonacci Robot Competition reserves the right to make any changes it deems necessary in the rules.



5. Marking Robots

Robots must be checked by the referees before the tournament and labeled with number tags (Robot Number / Team IDs). These stickers are provided by the competition organizers. The sticker cannot be placed on the robot or any other component that could interfere with the operation of the opponent's sensors. Before each new tour, robots must undergo technical control again.

6. Changes and Cancellations to the Rules

Changes and cancellations in the specifications are made by the main organizer of the competition in accordance with the regulations of the competition organizing committee.

7. Security Measures of the Competition

Class	gloves	Glasses
FootBot	Not necessary.	Not necessary.

Table 3: Security Requirements

9.1 Competitors will not be allowed into the competition area with any electronic device (e.g. phone, tablet, RF remote control).

9.2 It is forbidden to interfere with the robots without stopping the competition. Competitors who intervene despite this will be disqualified.

9.3 Robots with swollen batteries and leaked fluids cannot be raced. If dangerous situations such as short-circuiting or smoke are detected in a robot during the competition, the competition will be stopped and the robot will be disqualified.

10. Disclaimer

FootBot Category must work carefully and take the necessary precautions at every stage of the competition. Despite this, Fibonacci International Robot Olympiad Organizers disclaim all liability for any material damage or injury that may occur.

