



“CONTROLLED ROBOTS FOOTBALL” CONTEST RULES

Version 6.0 dated July 20, 2017

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1. General Provisions

1.1. Task Description

To score more goals than the opposing team.

1.2. Competition Categories

There are following categories:

"3x3" - three robots in each team;

"4x4" - four robots in each team

"5x5" - five robots in each team.

Teams of each category are allowed to use one reserve robot.

2. Field and Ball Specifications

The following requirements apply to the field:

playground color is green;

playground material is a green abrasion-resistant material with a low pile;

marking line color is white;

marking line width is 15-20 mm;

walls of the goals must be firmly attached to the surface;

width of the goals is 70-110 cm.

Recommended dimensions for the field:

length is 7400 mm;

width is 5400 mm;

length of the touchline is 6050 mm;

distance from the edge of the field to the touchline is 675 mm;

length of the goal line is 4050 mm;

distance from the edge of the field to the goal line is 675 mm;

diameter of the center circle is 1000 mm.

A standard golf ball shall be used as the ball:

colour is white;

diameter is 43 mm;

weight is 46 g.

See the fig. 1. for a sample of the field. Real field may differ from that presented in the figure.



3. Robot Specifications

The robot should fit into a vertical cylinder 22 cm in diameter and 22 cm high and be able to perform a kick with its kicking mechanism inside such cylinder.

The size of the robot may not exceed the above-mentioned dimensions during the game.

The robot weight is unlimited.

Each robot is controlled by one operator.

Control must be from the outside via any wireless communication channel. Any wireless control devices may be used.

Each robot must have a vertical flagpole represented by an axle for attachment of a colored flag corresponding to the playing team and robot number.

Wires must be connected together and fixed on the robot's body to prevent interference with other robots during the game.

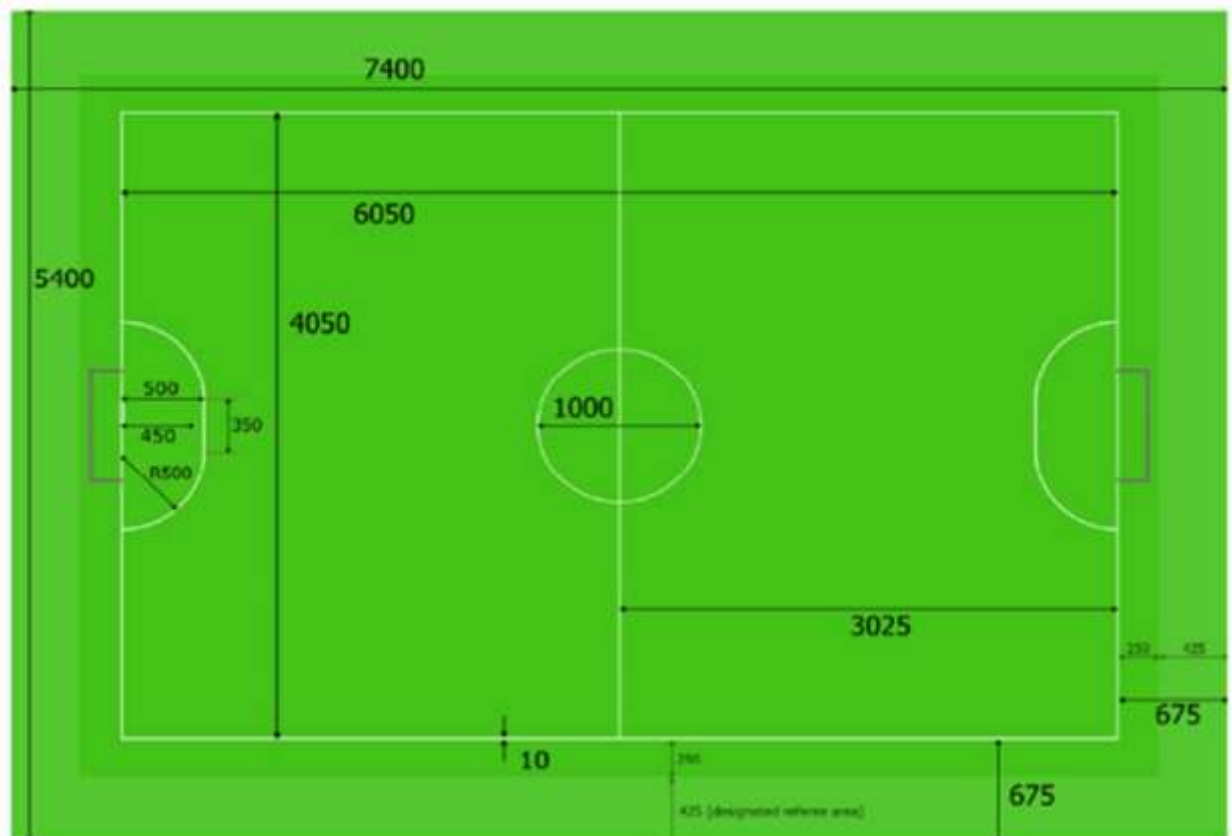
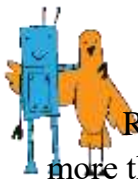


Fig. 1. Field scheme

Goalkeeper robot must have distinctive features. If allowed by the referee, the robot that came to the goal position in the beginning of the game can be considered as a goalkeeper.

Each robot in the team should be equipped with a kicking mechanism. Kicking mechanism is the mechanism that allows the robot in the center of the field, kick the ball outside the center circle, while remaining motionless.



Robots must not capture the ball in the process of playing. Capture means covering more than 50% of the ball by the robot's body.

It is recommended to equip robot with the external plastic or carton cylinder cover with the holes for the kicking mechanism.

4. Procedure of the Competition

The game is played according to the Olympic system. In the case of a large number of participants the Organizers may hold qualifying matches. Each team plays no less than two games with the other two teams.

All operators must stay out of the field behind their goal during the match. The operator may take the robot during the halftime break.

4.1. Game Duration

The duration of a game shall be two equal periods of 3 minutes each, with a half time break for no more than 2 minutes.

The duration of the period in the final matches is 5 minutes with a half time break for no more than 5 minutes.

4.1.1. Additional time

Additional period is played if the game issued in a tie. The period is played until the first goal, but not more than three minutes. If the tie persists even after the extra three minutes game, the teams play «1x1» match. The game may be over ahead of time by the referee's decision.

4.2. Referee's signals

During the game referee makes the whistle signals. One whistle during the game means that referee stops the game. Resumption of the game occurs also by one whistle. Double whistle means end of the time/match.

4.3. Game Commencement

Before the commencement of a game, either the field side or the kick-off shall be decided by the toss of coin. The team that wins the toss shall be allowed to choose either to pick the field side or to kick off.

In the second period teams change the field sides and attack the opposite goal. Teams can agree to not change halves of a field and goals with the consent of the referee.

The team whose opponent kicked off in the first period kicks off in the second period.

During the game there may not be more than two robots from one team in the penalty area including the goalkeeper.

The team is forfeited if there are no robots of this team at the start of the match / period.



4.4. Start and Kick-Off

At the start of the game the robots must be placed on the corresponding field sides.

At the start of the game the ball is placed in the center of the field.

Opponents of the team that kicks off should be outside the central circle until the ball is kicked off.

The game starts after the whistle of the main referee.

The ball is considered to be in play if the robot of the team kicks it with its kick-ing mechanism, and if the ball is moving.

The robot kicking the ball first must not touch the ball a second time before any other robot touches the ball, or the ball goes out of play.

The goal scored immediately after the first kick counts.

4.5. Goal

It is considered as a goal when the ball entirely crosses the goal line and there are no violations from the team that scored.

After the goal the ball is placed in the center of the field. The team that missed the goal gets the right to kick it off.

4.6. Substitution

The substitutions can be made during the game by the referee's clearance.

There is no limit on the number of substitutions.

To substitute the robot the player asks the referee to give (remove from the field) the robot that must be substituted by telling its number. Then the substitute robot enters the field in any place at the field's border.

4.7. Restart of the Robot

Restart of the robot is possible if at the beginning of the half or during the game:

it has lost the connection with the remote control;

the battery is low;

the robot is damaged.

By the decision of the referee the robot is removed from the field and is given to the operator for recovery. The game is not stopping.

4.8. Finish

The match ends in the following cases:

time allotted for the match has expired;

forfeit defeat of one of the teams;

by the referee's decision.



4.9. Game Moments

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4.9.1. Corner Kick

Corner kick occurs if the team's robot was the last to touch the ball which has wholly crossed the goal line, either on the ground or in the air, without a goal having been scored; awarded to attacking team.

The kick is taken from the corner of the field of play nearest to where the ball crossed the goal line.

All defending players must be at least 50 cm from the corner arc until the corner kick is taken.

A corner kick is taken as soon as the ball is kicked and moves.

4.9.2. Goal Kick

Is awarded in the following cases:

when the goalkeeper touches and holds the ball more than two seconds and there is the robot of the opposing team in the goal area;

when the opposite team's robot touched the goalkeeper in the goal area and the ball is also in the goal area;

when the opposing team's robot kicked the ball and it crossed the goal line, without a goal having been scored

The ball is placed anywhere within the defending goal area.

Opposite team's players must remain outside the goal area by the distance not less than 50 cm.

During the goal kick the robot cannot cross the border of the goal area with any of its part.

After the goal kick the robot may not touch the ball a second time before another robot touches it or the ball goes out of play.

After the whistle the ball is kicked by the goalkeeper or other player.

During the attack the ball can immediately go out of the goal area. In this case the game continues.

4.9.3. Penalty Kick

Is awarded in the following cases:

because of the capturing the ball by the defending team in the goal area;

after two warnings;

due to exceeding of the allowed quantity of defending robots in the goal area.

The ball is placed at a distance of 50 cm from the goal area and put into play by the opponent team with a whistle of the referee.

When a team performs a penalty kick, the robots of the opposing team should not be closer to the ball than the robots of the team which performs such kick. If such rule is violated, the penalty kick is replayed.

The robot kicker must not touch the ball a second time until it has been touched by another robot or the ball goes out of play.



4.9.4. Out

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played if the ball left the field through the touch line.

The ball is placed in the point where it crossed the line and is kicked off by the opposite team after the referee's whistle.

Robot during throwing the ball in cannot cross the touch line with any of its part.

After the throw-in the robot may not touch the ball a second time until another robot touches it or the ball leaves the field.

At the moment the ball is thrown in, the opposing team robots may not be closer to the ball than the robots of the team that throws in.

4.9.5. Free Kick

The free kick is awarded by the referee's whistle in the following situations:

- opposing team captures the ball;
- opposing team violates the kick-off rules;
- opposing team violates the goal kick rules;
- opposing team violates the penalty kick rules;
- opposing team violates the throw-in rules;
- opposing team violates the free kick rules.

The free kick is taken from where the foul occurred.

Then the ball is thrown in with the whistle of the referee as specified in the Contest Rules.

The robot kicker must not touch the ball a second time until it has been touched by another robot or the ball becomes out of play.

4.9.6. Drop-Ball

In the case of a clinch for over five seconds, referee can decide to drop in the ball. Then the referee stops the game by the whistle and places the robots and the ball at his own discretion and gives the command to continue.

Recommendation to the players: when the game is stopped due to such situation the robots should move out distance of not less than 50 cm from the clinch place.

5. Penalties

During the competition the following penalties can be applied:

- warning;
- penalty kick;
- match penalty.

The warnings are given to the teams for:

- delay of the game resuming;
- damage to the ball or the field;
- entering the field by the robot operator;
- attacking (or holding) the goalkeeper in the goal area if the ball is outside of it;



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touching the robot on the field by the operator during the game without referee's permission;

exceeding the number of the robots on the field during the game.

After two warnings the team gets free kick in its goal.

After three warnings one of the robots of the guilty team (by the referee's decision) must leave the field of play immediately .

If the team has no more robots on the field after the sending off, this team will forfeit.

After the sending off of one of the robots of the team all its warnings are canceled.

6. Procedure to Determine the Winner

The team that has scored more goals at the end of the game is the winner.



7. Revision History

№	Doc. No.	Date	Note	Previous Version	Update Version
1	2	3	4	5	6
1.	4.1		Paragraph added	-	6.3.4, 6.3.5
2.			Paragraph added	-	6.8.3-6.8.5
3.			Paragraph 2.1.12 changed	At least one robot per team shall be fitted with kicking mechanism corresponding to the size of the robot.	Each robot in the team should be equipped with a kicking mechanism. Kicking mechanism is the mechanism that allows the robot in the center of the field, kick the ball outside the center circle, while remaining motionless.
4.			Section added	-	3
5.	5.0		Subparagraph added	-	2.1.1.3, 2.2.3, 6.2.6, 6.2.7, 6.5.1.1-6.5.1.4, 6.5.4, 6.7.3, 9.1.1.3
6.			Section added	-	11
7.			Subparagraph invalid	2.1.3, 2.1.4, 2.2.2	-
8.			Subparagraph changed	Ball color is orange or pink.	Ball color is white, orange or pink.
9.			Subparagraph 2.1.2 changed	Before the match starts the robot should fit into a vertical cylinder 22 cm in diameter.	The robot should fit into a vertical cylinder 22 cm in diameter and 22 cm high. The size of the robot may not exceed the above-mentioned dimensions during the game.



№	Doc. No.	Date	Note	Previous Version	Update Version
1	2	3	4	5	6
10.			Subparagraph 2.1.9 changed	Each robot must have a vertical flagpole represented by an axle for attachment of a colored flag corresponding to the playing team.	Each robot must have a vertical flagpole represented by an axle for attachment of a colored flag corresponding to the playing team and robot number.
11.			Subparagraph 6.2.5 changed	The ball is considered as kicked off after the first touch with the kicking mechanism of the robot of the team that starts the game.	The ball is considered in the game if the robot of the team kicks it with its kicking mechanism, and if the ball is moving.
12.			Subparagraph 6.5.1 changed	Free kick is appointed by the referee's whistle because of the capturing the ball by the opposing team.	The free kick is appointed by the referee's whistle in the following situations:
13.			Subparagraph 7.1.2 changed	The period is played until the first goal.	The period is played until the first goal, but max. 3 min.
14.	5.0.1		Subparagraph 2.1.2 changed	The robot should fit into a vertical cylinder 22 cm in diameter and 22 cm high. The size of the robot may not exceed the above-mentioned dimensions during the game.	The robot should fit into a vertical cylinder 22 cm in diameter and 22 cm high and be able to perform a strike with its striking mechanism inside such cylinder (see 2.1.12). The size of the robot may not exceed the above-mentioned dimensions during the game.
15.	5.0.2		Subparagraph 1.1.7 added		Width of the goals is 70-110 cm



№	Doc. No.	Date	Note	Previous Version	Update Version
1	2	3	4	5	6
16.			Paragraph 11 changed		Note added: «Qualification exercises are NOT obligatory during the regional competitions»
17.	5.0.3		Subparagraph removed	2.1.3, 2.1.4, 2.2.2	
18.	6.0		Entire text changed	Based on version 5.0.3	
19.					
20.					