



RobotChallenge – Robot Rugby Rule

Revised on September 15, 2025

Introduction: A 3-minute Game between two remote-controlled robot rugby teams, each consisting of multiple robots, with reference to the rules of human rugby. Each team will have a captain. The captain is allowed to call timeouts, and teams are granted limited time for robot maintenance.

group:

- A. Junior
- B. Senior

1 Robot Requirements

1.1 General Robot Specifications

Note on robot weight: Remote controllers are not included in the robot's weight.

	Junior	Senior
Robot size	less than 20cm×20cm×20cm	
Weight (No remote control)	less than 1.5KG	less than 3KG
Robot Extension	After the start of the game, the robot can expand its size.	
Robot number	3 robot and 3 player (Less than 3 players are allowed to register)	
Robot ID	Before the start of the game, each team robot needs to attach numbers 1, 2 and 3 respectively	

1.2 Class Specifications

	Junior	Senior
Robot Requirements	Controller and motor must be LEGO EV3/NXT or VEX IQ, sensor and structure are not limited.	not limited
Robot Controller	Limit 1 controller per robot	not limited
Motor	The number of motors per team is limited to no more than 9 motors.	not limited
Game field	The material of the field is paper or cloth.	The material of the field is carpet. Please pay attention to tire skid-proof.
Remote control	Lego EV3/ NXT/Spike controller, limit the use of Lego controller as a	Restrict the use of 2.4 band remote controllers (including



RobotChallenge – Robot Rugby Rule

	remote control, please pay attention to Bluetooth Gameing debugging before the competition. VEXIQ equipment, please use the corresponding remote control.	Bluetooth control remote controllers)
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------

2. General Requirements

2.1. Field Dimensions

Junior& Senior	
Length	350cm
Width	150cm
The distance from the center of the court to the goal area	150cm
The goal area length	25cm
The goal area wide	150cm
The distance from the center kick-off points of the court to two other kick-off points on both Sides	75cm
Protective wall	10cm

As shown in the figure:

- The black circle is the kick-off points.
- The green area is the game field area.
- The red area is the goal area
- Outside the blue area is the remote control robot area for the players. The distance is about 50cm-100cm.

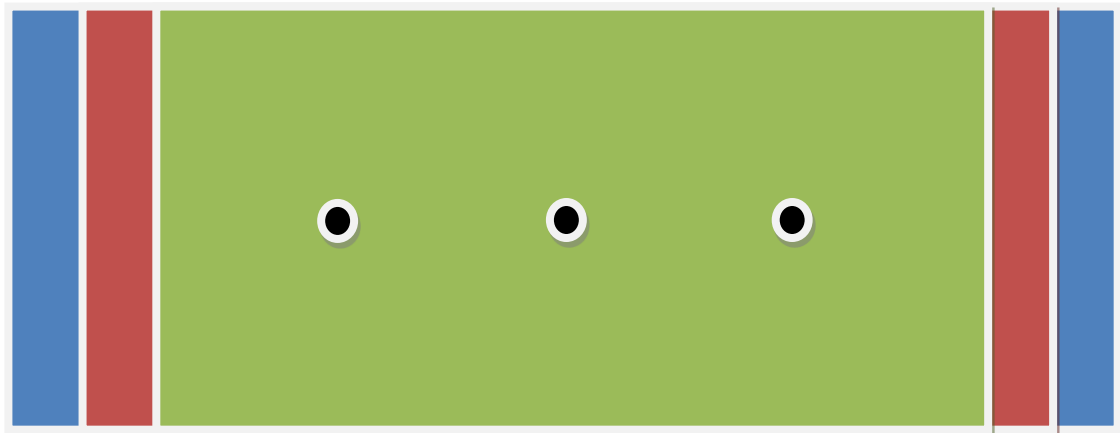


Figure 1: Rugby Field (Schematic Diagram)

RobotChallenge – Robot Rugby Rule

2.2 Participant Positions

As shown in Figure 1, The blue area is the zone 50cm-100cm outside the end line, where participants remotely control their respective robots.

2.3 Ball

The ball is oval and made of rubber, and has a length of 16cm to 19cm, a diameter of 10cm to 12cm, and a weight of 160g.

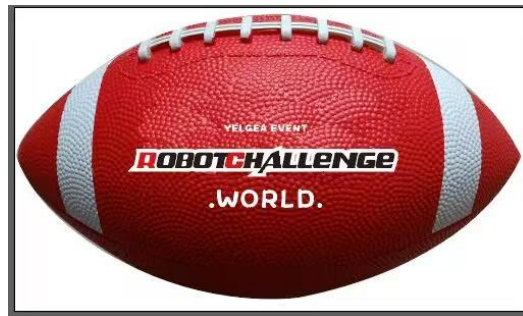
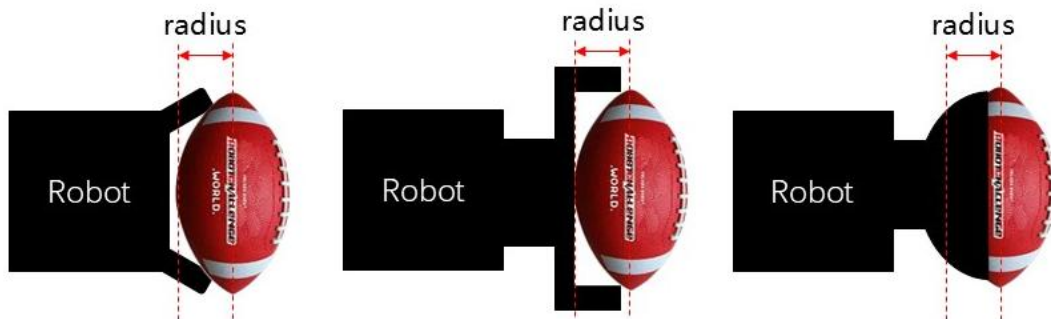


Figure 2: Rugby Ball Example

2.4 Prohibited matter in game

- A. Do not incorporate a jamming device.
- B. Do not suck on the ball itself or hide it intentionally.
- C. Do not mount a device to fix the ball to the robot.
- D. The robot's extended structures must not exceed the radius of the ball.



- E. Do not use parts that damage or stain the coat.
- F. Do not set up a device that contains liquid, powder and gas and sprays on the other.
- G. Do not incorporate an ignition device.
- H. Do not incorporate a device that separates the robot body.

3 Game

3.1 competition format

- A. Each team is allowed a maximum of 3 robots on the field. It is also allowed to register with fewer than 3 robots, but this is not recommended. Each robot corresponds to one team member. Members and their robots will bear the same number, e.g., numbers 1-3.



RobotChallenge – Robot Rugby Rule

- B. Game duration is 3 minutes. The referee decides on interruptions, resumptions, and terminations; the clock will be stopped during these periods.
- C. Determining the Winner:
 - a. The team scoring the most goals during the Game wins. Draws are possible in the group stage.
 - b. If a 5-point difference occurs during the Game, the Game ends immediately, and the leading team wins.
 - c. If a knockout Game is tied at the end of regulation time, overtime will be played until one team scores first (golden goal). The first team to score wins.

3.2 Competition Process

3.2.1 Start of the game

- A. The referee asks both teams if they are ready. Upon confirmation, the referee instructs both teams to place their 3 robots within their respective goal areas (no part of the robot may touch the field area). Remote controllers must be placed on the ground, awaiting the referee's signal.
- B. The referee places the ball at the center point of the field, instructs team members to pick up their remote controllers, and blows the whistle to start the Game and the clock.

3.2.2 End of the game

The Game ends with the referee's whistle signal. Team members must stop operating their robots and place remote controllers on the ground. Both captains confirm the Game score.

3.2.3 Interrupt the game

The Game is interrupted in the following situations:

- A. When the ball goes out of bounds, i.e., leaves the field over the 10cm high wall.
- B. When the referee determines that due to a chaotic situation, the ball is stuck and not moving on the field.
- C. When the referee determines that personnel on site may interfere with the Game progress.
- D. When a "passive holding" situation occurs (Passive holding: the rugby ball comes to rest on top of a robot due to contention between both teams).

3.2.4 Resuming Play

Play resumes as follows:

- A. After a goal is scored, the clock stops. The referee places the ball at the center point. The scoring team places its robots in its own goal area. The conceding team places its robots at a position 50cm or more away from the ball. Wait for the referee's whistle to resume play; the clock restarts.
- B. When the ball goes out of bounds, the clock stops. Place the ball at the kick-off point nearest to where it went out. The team that kicked the ball out places its robots at



RobotChallenge – Robot Rugby Rule

least 75cm away from the ball. The team that did not kick the ball out places its robots at least 25cm away from the ball. Wait for the referee's whistle to resume play; the clock restarts.

- C. When play is interrupted due to chaos or passive holding, the clock stops. Place the ball at the kick-off point nearest to the area of chaos. Both teams place their robots 75cm away from the ball. Wait for the referee's whistle to resume play; the clock restarts.
- D. Play should resume promptly after an interruption. If the referee is addressing a team foul, the resumption of play will be delayed.

3.2.5 Play Continues

- A. During play, if a robot is pushed out of bounds or tipped over and unable to move, play continues.
- B. In such situations, the out-of-bounds or overturned robot can attempt to return to the field by itself or with help from other robots. Participants must not touch the robot unless permitted by the referee during a post-goal reset or other resumption scenarios. Otherwise, it will be considered a violation.

3.2.6 Timeouts and Robot Repair

- A. During the Game, a team may request one 30-second timeout for strategy discussion. This can be requested by the captain after conceding a goal or during a Game interruption, subject to the referee's approval. Each team has only one timeout opportunity per Game.
- B. If a robot becomes inoperable due to malfunction during the Game, it can be removed from the field as directed by the referee.
- C. Repairs during the Game can only be conducted in a designated area, with a maximum of 30 seconds granted per repair attempt. Repairs are only allowed during Game interruptions. If the repair is not completed within 30 seconds, the team may choose to continue the Game with the repaired robot or leave it in the designated area for further repair, continuing with the remaining robots. The unrepaired robot can re-enter during the next interruption.

3.2.7 Disqualification

A robot and its participant must withdraw from the Game under the following circumstances:

- A. If the robot's dimensions do not comply with standards.
- B. If any action listed in section 2.4 (Prohibited Actions) occurs.
- C. If the referee determines the robot is "about to catch fire" or fire is visibly emanating from the robot.

3.2.8 Scoring a Goal

A goal is scored (1 point) under the following conditions:



RobotChallenge – Robot Rugby Rule

- A. If the robot is with the ball and any part of the ball touches the end line wall of the goal area (i.e., the 10cm high side wall on the goal line).
- B. If the robot is separated from the ball, but the ball has already touched the end line wall of the goal area, provided any robot from the attacking team touches the ball, the attacking team scores 1 point.
- C. If a team is disqualified by the referee for a serious violation, the opposing team is awarded 5 points directly.

3.2.9 Violations

The following are considered violations:

- A. Robots must not start or expand before the referee starts the Game. If the same team commits this violation twice consecutively, they will receive one yellow card warning.
- B. Participants must not touch the robot unless the referee explicitly permits it. Otherwise, the referee will issue one yellow card warning.
- C. If the same participant receives two yellow cards from the referee, they will be shown a red card and sent off. The team will continue with one fewer participant and robot.
- D. If all three members of a team receive red cards, the team's score for that Game is reset to zero, the opponent wins directly, and is awarded an additional 5 points.
- E. Deliberately damaging an opponent's robot is prohibited. In severe cases, the offender will be shown a red card directly. For actions deemed by the referee as even more severe, the offending team will forfeit the Game directly, their score reset to zero, and the opponent wins with an additional 5 points.
- F. If the score is tied at the end of a group or knockout Game, the referee will compare the number of yellow and red cards received by both teams' members to determine the winner, as follows:

Case	Yellow Card	Result Judgment
Case 1	Only one team of AB team was given a yellow card	The team without yellow card will win by adding 1 point
Case 2	All AB teams were given yellow cards, while A was given less yellow cards	Team A wins by adding 1 point
Case 3	All AB teams were given yellow cards, only A has red cards	Team B wins by adding 1 point
Case 4	All AB teams were given yellow cards and the same red cards	The team with a yellow card wins by adding 1 point
Case 5	Neither team AB were given a yellow or red card	The group Game is evenly divided, and the knockout Game is won by the golden ball

4 Objections

4.1 Raising Objections

- A. No objection to the referee's decision.
- B. If there is any lack of understanding regarding the application of the rules, the team captain may raise an inquiry with the referee.

5 Flexibility of Rules

These rules should be flexible enough to adapt to changes in the number of participants and the content of the competition, provided the concepts and foundations of these rules are respected.

6 Liability

- A. Participating teams are always responsible for the safety of their robots and for any accidents caused by their team members or robots.
- B. The RobotChallenge organizing committee and its personnel shall not be held liable for any accidents caused by any participating team or their equipment.