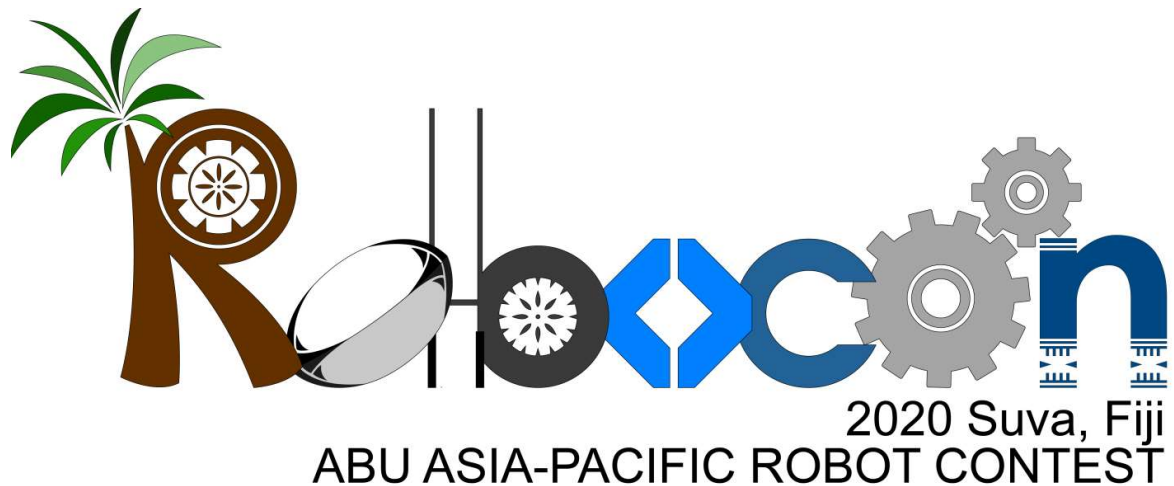


ABU  
Asia-Pacific Robot Contest 2020  
Suva, Fiji



THEME & RULES

“ROBO RUGBY 7s”

**UPDATED on September 30, 2019**

○Page 8, Terms and Definitions #20

○page 10,11, 1.6. Task in the Kicking Zone d)- i and ii

ABU Asia-Pacific Robot Contest 2020 Suva, Fiji  
Host Organising Committee

<http://aburobocon2020.com.fj>

17	Pass	Throwing the Try Ball in the air and/or rolling the Try Ball on the ground by the Pass Robot.
18	Receive	Receive means for TR to hold the Try Ball that has been passed on from PR. If PR rolls the Try Ball to the Receiving Zone, TR must pick the Try Ball only in the Receiving Zone. A successful 'Receive' means TR holds the Try Ball and the Try Ball is not in contact with the surface of the game field.
19	Try	Try means placing the Try Ball in one of the 5 Try Spots. A successful Try means: a) when the Try Ball touches the surface of the Try Spot for the first time, TR and Try Ball has to be in contact with each other. b) With the moment of a), the Try Ball must not touch the boundaries of the Try Spots. c) After the Try, the Try Ball must remain within the Try Spot.
20	Kick (Goal Kick)	The 'Kick' must satisfy the following five conditions: a) The robot must not stay in touch with the Kick Ball before it starts the kicking. (Before starting the kicking process, the kicking robot must come to halt in the following status. The orthogonal projection to the field of the robot must not overlap the orthogonal projection to the field of the ball & tee) b) The surface of the robot which comes in contact with the ball must be limited to <u>one flat surface</u> or <u>one convex surface</u> . The use of soft and flexible materials is not allowed. c) When the moment robot's contact surface comes in contact with the ball, the contact surface of the robot must not reduce the speed to zero. d) The contact surface of the robot with the balls must not have grabbing or bonding function. e) <b>2019.9.30 deleted.</b>
21	Goal	For a successful Goal, the Kick Ball must pass over the cross bar in between the sticks of the H-shaped stationary post (Conversion Post)

## 1. Game Procedure and Competition Tasks

Each team has to complete tasks in the following orders:

(Robots in any defined zone means all parts in contact with the ground needs to be within that zone.)

### 1.1. Setting of robots

- a) Team must set up their robots in a one minute 'setting-time' before the game starts.
- b) Three (3) team members and up to three (3) pit crew members are allowed to participate in the set-up process.
- c) The team that fails to complete setting up within one minute can resume setting up after the game has started. Once setting up is finished, the team can start their robot with permission from referee.

### 1.5. Task in the Receiving Zone

- a) TR starts from TR Start Zone with the start sound. It travels to the Receiving Zone to receive the Try ball from the PR.
- b) TR can receive the Try Ball only in the Receiving Zone.
- c) After receiving the Try Ball, TR can go out of the Receiving Zone and travel through the field avoiding the 5 defending players (Obstacles) to score a Try in one of the 5 Try Spots.
- d) The robots can touch the Obstacles but cannot break it which leads to disqualification.
- e) If the Try Ball enters the opponent's field the opponent team will receive 10 points automatically. This Try Ball will be picked up by the referee and will not be used again.
- f) If the ball moves out of the game field while playing it cannot be used again.
- g) PR can pick up the next Try Ball when the TR has successfully placed the Try Ball in the Try Spot or the current ball moves out of the game field excluding the Try Spots.

### 1.6. Task in the Kicking Zone

- a) After TR has successfully placed ONE Try Ball in the Try Spot, the team is allowed to use ONE Kick Ball. Throughout the game a team will get the same number of Kick Ball as the number of successful Try. A maximum of three Kick Balls can be used at the same time provided a team has three or more successful Tries.
- b) There are 7 Kick Balls. These will be shared by the two teams.
- c) If the team is entitled to a Kick Ball, a team member is required to pick the Kick Ball from the Ball Rack after informing a referee.
- d) The team has to choose one of the following for goal kick process;
  - i. A team member sets the Kick Ball/Kick Balls in the Kicking Zone using a Tee for each ball. During this time both PR and TR must stay out of the Kicking Zone and they must not be in motion. After placement the team member must move out of the game field (Except for an operator of a manual robot). Then PR or TR can start the kicking process.
  - ii. A team member loads the Kick Ball/Kick Balls into PR or TR inside its respective Start Zone. The team member can load the

Tee/Tees during this time or before the game starts. Then the robot sets the Kick Ball/Kick Balls in the Kicking Zone using a Tee for each ball. The same robot must kick the Kick Ball/Kick Balls. The other robot must stay out of the Kicking Zone throughout the kicking process.

- e) The Goal kick can be done by either PR or TR.
- f) The points will be awarded after a successful Goal kick.
- g) If the Kick Ball enters the opponent's field directly then the opponent team will automatically receive 10 points. If in case the Kick Ball hits the conversion post and lands in the opponent's field no points are given to the opponent's team. This Kick Ball will be picked up by the referee and will not be used again.
- h) If the Kick Ball lands in the team's own game field during the kicking process the team member must pick the Kick Ball and move it out of the game field but not to be used again.
- i) If the Kick Ball remains on the Tee after a kick attempt the team can kick again. During this time the team member is not allowed to touch the Kick Ball or Tee.
- j) If the Kick Ball falls of the Tee without a kick attempt the team member is allowed to place the Kick Ball on the Tee provided the robots are not in motion.
- k) If the team member picks up multiple Kick Balls, the team must kick all the Kick Balls before proceeding to the next task.

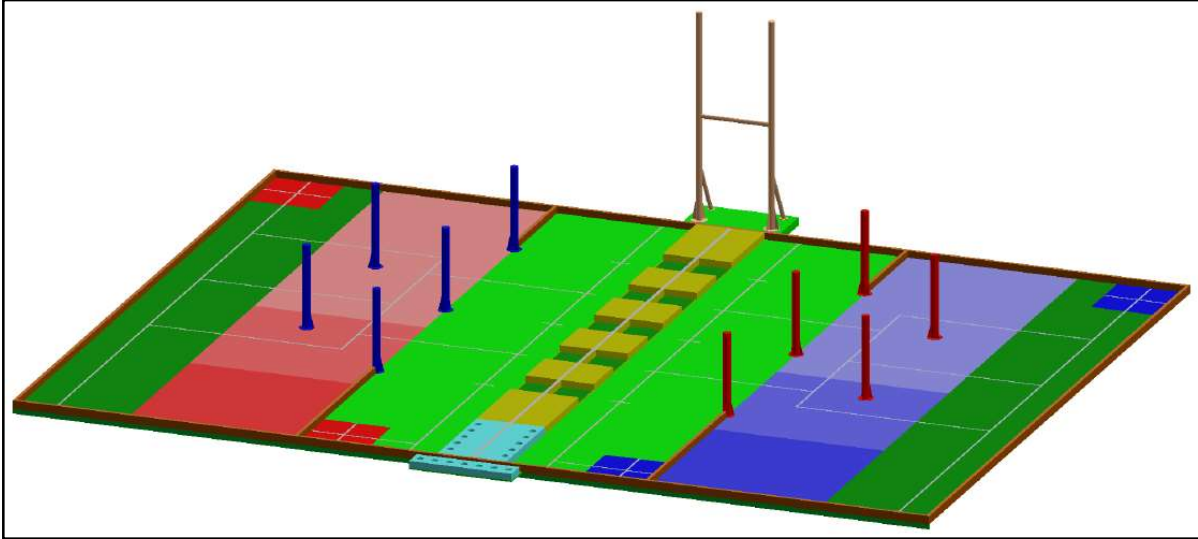
#### 1.7. Others

- a) Team members cannot touch robots except during retry, start and when loading the Kick Ball.
- b) In case of an emergency, with permission from referee, team members can enter the contest field to push hardwired emergency stop button.

#### 2. Retries of the Robots

- a) A retry can be made only after the referee's permission.
- b) Team members must place both robots at their Start Zone while preparing for a retry and must restart from Start Zone.
- c) There are no limits for retry. A retry is considered by the rule with approval from the referee.

Game Field: 3D View



Field: 2D View with Markings and Zone Dimensions

**All Dimensions are in Millimeters**

