

# RCJ Rescue Line SuperTeam Rules

<https://2024.robocupjunior.eu/superteam-rescue>

Version 1.0, June 15 (Sat), 13:00

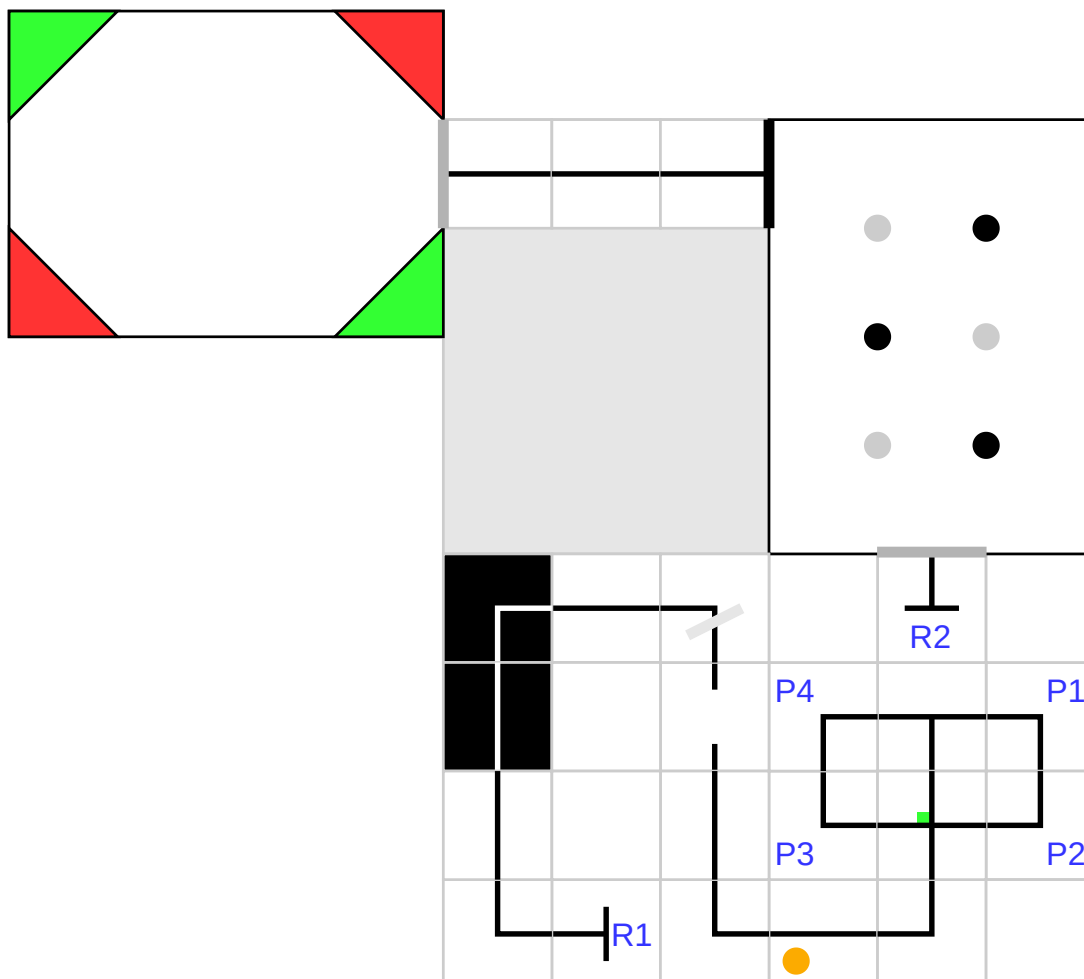


In general, the official rules (e.g., robot construction, or modifying the robot during a scoring run being prohibited) still apply.

## Robots

- Two or more teams form a SuperTeam
- In a scoring run, exactly two robots (from different teams) have to be on the field

## Field



- As shown in the drawing, the field consists of two evacuation zones connected with a straight line
- A starting tile (R2) is placed in front of the first evacuation zone, which includes 6 victims
- The second evacuation zone has evacuation points in every corner
- There will be no obstacles, speed bumps, or debris in the evacuation zones
- There are silver/black tape strips to mark entrance/exit of the evacuation zones
- A line leads from another starting tile (R1) to an intersection tile (the tile between P2 and P3)
- This path consists of only a black line, gaps, and speed bumps (i.e., no obstacles, seesaws, intersections, ...)
- In one segment, the tiles will be inverted (i.e., white line on black floor)
- The layout of the two evacuation zones (incl. placement of victims and evacuation points), the connecting line, and the tiles P1/P2/P3/P4/R1 as well as the tile between P1 and P4 will be exactly as shown in the drawing
- All other elements may be different in a scoring run and are only shown as an example

## Play

- The SuperTeam has a maximum of 8 minutes for their run (incl. time for calibration)
- Two team captains may enter the competition area
- The first robot is placed on starting tile R1, and the second robot is placed on starting tile R2
- The first robot has to follow the line until the final intersection tile
- Afterwards, the first robot has to correctly stop on one of the "parking position" tiles as indicated by the intersection tile:
  - If the green intersection marker is in the top right, the robot has to stop on P1 (refer to the drawing)
  - Respectively, if in bottom right, it has to stop on P2; if in bottom left, it has to stop on P3; and if in top left, it has to stop on P4
  - The robot has to stop there for at least 5 seconds
- Once the first robot has reached the intersection tile, the second robot may leave its starting tile and enter the evacuation zone
- The second robot has to carry the victims into any of the evacuation points in the other evacuation zone
- The second robot may traverse between the two evacuations zones multiple times
- Lacks of progress of the two robots are independent of each other
- A lack of progress occurs when:
  - a team captain declares a lack of progress
  - the first robot loses the black line without regaining it by the next tile in the sequence
  - the first robot reaches a line that is not in the intended sequence
  - the second robot moves before the first robot reached the intersection tile
- If a lack of progress occurs, the robot must be positioned on the previous checkpoint tile (or its respective starting tile)
- Scoring is as follows:
  - Robot 1 reaches a checkpoint on the 1st / 2nd / 3rd / 4th+ attempt: 60 / 40 / 20 / 10 points
  - Robot 1 stops (at least 5 seconds) on the correct parking position on the 1st / 2nd / 3rd / 4th+ attempt: 60 / 40 / 20 / 10 points
  - Robot 2 moves a victim into an evacuation point on 1st / 2nd / 3rd / 4th+ attempt: 20 / 15 / 10 / 5 points/victim
  - Attempts are counted from the starting tile or the last visited checkpoint

- After 5 minutes, the teams may decide to start the second robot manually; in this case, the first robot will be stopped and cannot score any additional points
- The scoring run ends when:
  - the 8 minutes of allowed game time expire
  - both team captains call the end of the game
  - the last victim is placed inside an evacuation point and the first robot has stopped on the correct "parking position" tile for at least 5 seconds

## **Competition**

- There will be multiple rounds
- Only the best round is used to determine the best SuperTeam (most points, smallest time)