RoboCupJunior Rescue Line Entry Rules 2026

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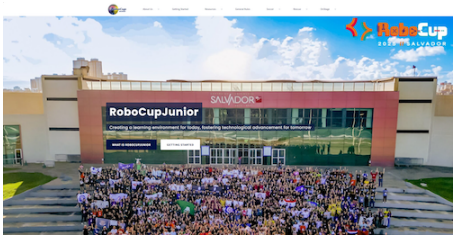
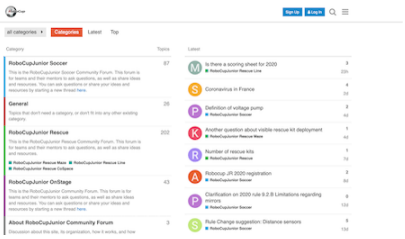
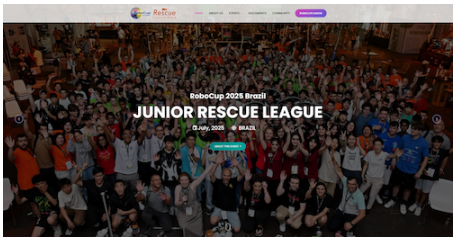
Official Resources

RoboCupJunior Official Website	RoboCupJunior Official Forum	RCJ Rescue Community Website
		
https://junior.robocup.org	https://junior.forum.robocup.org	https://rescue.rcj.cloud

Corrections and clarifications to the rules may be posted on the forum before updating this rule file. It is the responsibility of the teams to review the forum to have a complete vision of these rules.

Before you read the rules

Please read through the RoboCupJunior General Rules before proceeding with these rules, as they are the premise for all rules. The English rules published by the RoboCupJunior Rescue Committee are the only official rules for RoboCupJunior Rescue Line Entry 2026. The translated versions each regional committee can publish are only referenced information for non-English speakers to understand the rules better. It is the responsibility of the teams to read and understand the official rules. These rules are designed as an introductory version for beginners. Please take care not to confuse them with other rule sets.

Purpose and Scope

This document provides a general framework and recommendations for organizing competitions. It is not intended to be prescriptive or exhaustive. Each local organizing committee may adapt or modify these guidelines flexibly to meet the needs and circumstances of their community.

The guiding principle is this: challenges must enrich students' learning and problem-solving—not become obstacles that cause failure due to excessive technicalities. Overly complex or rigid requirements risk shifting focus away from education and but just into rule compliance.

Organizers are therefore encouraged to:

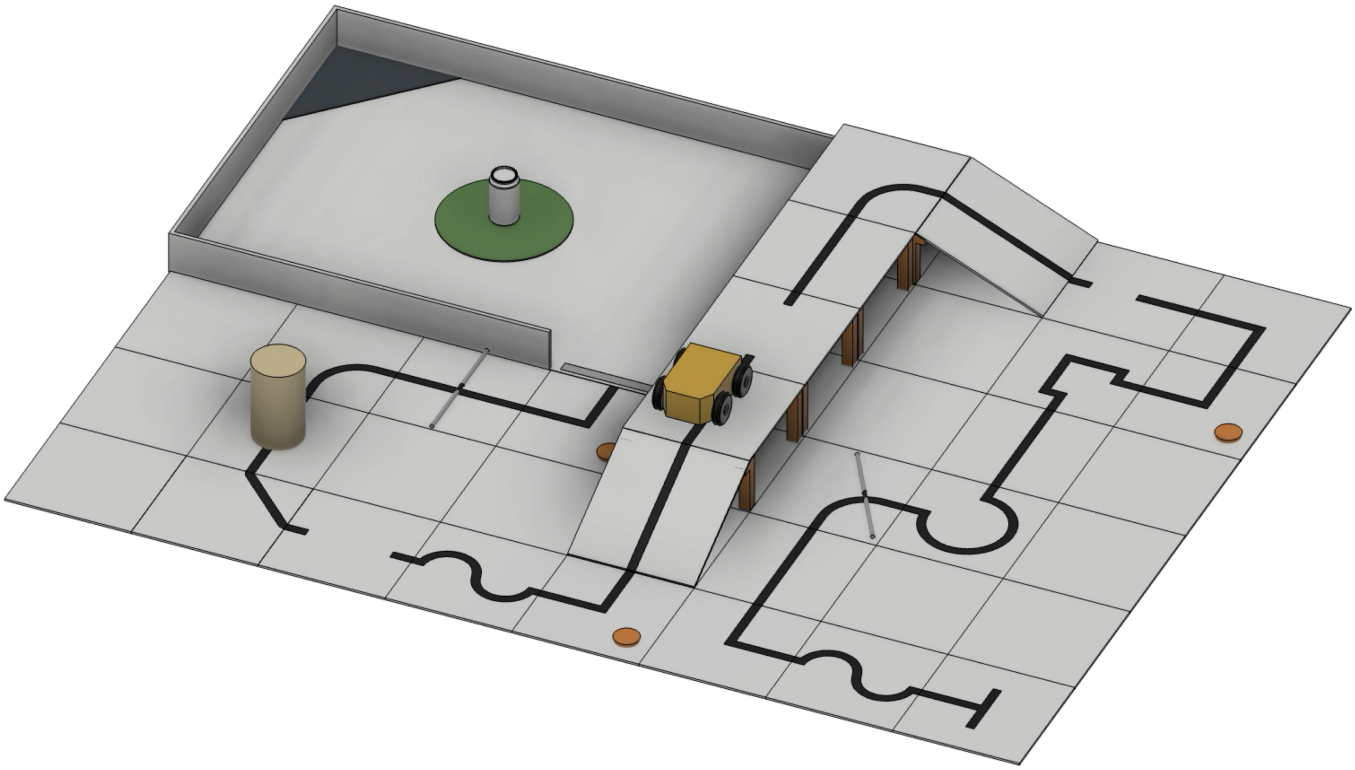
- Prioritize student growth and exploration above strict technical constraints.
- Ensure fairness while avoiding unnecessary complications.
- Adapt challenge complexity so it motivates learning rather than discourages participation. inadvertently creating a false sense of "trickery".

By following these principles, competitions will remain true to their educational mission and provide meaningful, inspiring experiences for students.

Scenario

The land is too dangerous for humans to reach the victims. Your team has been given a difficult task. The robot must be able to carry out a rescue mission in a fully autonomous mode with no human assistance. The robot must be durable and intelligent enough to navigate treacherous terrain with hills, uneven land, and rubble without getting stuck. When the robot reaches the victims, it has to gently and carefully transport each one to the safe evacuation point where humans can take over the rescue.

Time and technical skills are essential! Come prepared to be the most successful rescue team.



Summary

An autonomous robot should follow a black line while overcoming problems in a modular field formed by tiles with different patterns. The floor is white, and the tiles are on diffrent levels connected with ramps.

Teams are not allowed to give their robot any information in advance about the field as the robot is supposed to recognize the area by itself. The robot earns points as follows:

- 10 points for overcoming each obstacle (bricks, blocks, weights, and other large, heavy items). A robot is expected to navigate various obstacles.
- 10 points for reacquiring the line after a tile with one or more gaps.
- 10 points for each successfully navigated ramp tile .
- 10 points for negotiating a tile with one or more speed bumps.
- 10 points for each victim removed from the Victim area (green circle).
- 30 points for each victim successfully rescued.

If the robot gets stuck in the field, it can be restarted at the last visited checkpoint. The robot will earn points when it reaches new checkpoints. Last on the path, there will be a rectangular zone with walls (It’s called the evacuation zone). The evacuation zone is delimited in the entrance with a reflective silver tape strip attached to the oor. In the evacuation zone the robot has to locate and transport the victims to the designated evacuation point.

Contents

1. RoboCupJunior International 2026 General Rules

These rules apply to the international RoboCupJunior competition. However, regional, SuperRegional, and local tournaments may have variations or adaptations to these rules to suit their specific competition needs. It is important to check with the organizers of the tournaments you are participating in to confirm which exact rules will be in use.

If teams are unsure about any aspects of the General Rules or specific League Rules, they are encouraged to inquire via the official RoboCupJunior Forum for clarification: https://junior.forum.robocup.org/

For questions regarding any of the rules or RoboCupJunior in general, teams can also reach out to the RoboCupJunior community through the official Discord Server.

1.1. Team Requirements

1.1.1. Team Size

Minimum Team Size: Teams must consist of at least 2 members.

Maximum Team Size:

- Soccer and Rescue Leagues: 4 members.
- OnStage League: 5 members.

Regional and SuperRegional competitions may define their own team sizes depending on their venue capacity and regional variations. Teams attending the International competition will only be able to have the maximum number of registered participants in the qualifying team.

Shared Members and Robots: No team member(s) or robot(s) may be shared between teams.

1.1.2. Team Supervision

Junior Mentor Requirement: Each Junior team must have at least one Junior Mentor registered and attending with the team.

Mentors and Parent/Chaperones are responsible for supervising their teams and maintain a duty of care/well being for their team members, as appropriate for their home region's regulations. Any concerns regarding team member welfare should be brought to the attention of the event organizers immediately.

The Junior Mentor is expected to be present during all official competition events with their team. They must not interact in an imposing manner with teams, robots, judges, or the judging process. Any incident considered inappropriate will be handled by the event organizers and may lead to disciplinary actions.

1.1.3. Age Requirements

Junior Student Members: Must be between 14 and 19 years old as of July 1st of the competition year.

Junior Mentors and Parent/Chaperones: Must be 19 years or older as of July 1st of the competition year.

1.1.4. Team Members

Entry Leagues: RoboCupJunior Entry leagues and other "Primary" divisions (where minimum age may vary) are not run at the international competition but feature in many regions and SuperRegional tournaments.

Technical Roles: Every team member must have a defined technical role (mechanical/design, electrical/sensing, software etc.) and should be able to explain their role during technical judging.

1.2. International Team Qualification Process

- To qualify for the International competition, each region's Regional Representative will complete the Slot Allocation Process at the start of the Competition year. Regional Representatives can be found at the Official Website.
- After the region's local qualifying tournament, the Regional Representative will assign slots. Once confirmed by the RoboCupJunior organizers, the qualified teams will be invited to register through the official RoboCup Federation registration system.
- The qualification process differs depending on the size of each region, but slot allocation must strongly reflect results from regional competitions.
- If a region does not use or releases its allocated slots, Regional Representatives may request additional slots during a later stage of the allocation process.

1.3. Robot Requirements

1.3.1. Robot Communication

Permitted Communication: Communication between robots during gameplay is allowed as long as it uses the 2.4GHz spectrum and its power output does not exceed 100 mW EIRP (Effective Isotropic Radiated Power) under any circumstances.

Responsibility: Teams are responsible for managing their robot communication. Spectrum availability is not guaranteed.

Component Communication: Communication between components of the same robot is permitted.

League Adaptability: Each league may modify the robot communication rules to ensure they meet their specific requirements.

1.3.2. Safety and Power Requirements

Electrical Power:

- Robots must not use mains electricity.
- Maximum allowed voltage: 48V DC or 25V AC RMS (Root Mean Square).
- Voltage must be easily measured during inspections, and measuring points must be covered for safety or designed with safety considerations in place.

Battery Safety:

- Lithium batteries must be stored in safety bags, and charging must be supervised by team members in competition areas.
- Teams must follow safety protocols, including battery fire handling and evacuation procedures.

Robot Safety Design:

- **Power Management**: Secure batteries, safe wiring, and emergency stop functionality.
- **Mechanical Safety**: No sharp edges, pinch points, or other hazards. Actuators must be appropriate for the robot's size and function.
- **Hazardous Behavior**: Teams must report potentially dangerous robot behaviors at least two weeks before a RoboCupJunior event.

1.4. Documentation and Sharing Requirements

1.4.1. RoboCupJunior Team Posters

Purpose: Posters are a tool for sharing robot designs and insights with judges, teams, and the public. Posters will be hung in public competition areas in the venue and digital copies or photographs will be shared by RoboCupJunior after the competition.

Size: Posters must be no larger than A1 size (60 x 84 cm).

Content: Posters should summarize design documents and present the robot's capabilities in an engaging format.

1.4.2. Technical Description Video (See League Documentation)

Content:

- **Robotic Demonstration**: Show fully functional robot systems to highlight technical aspects.
- **Design Process**: Explain design choices and team problem-solving approaches.
- **Presentation**: Clear and high-quality, explaining innovative or unusual techniques.
- **Innovation & Sustainability**: Highlight new technologies and sustainable practices.

Submission: Guidelines will specify video length and deadlines per league.

1.4.3. Sharing Team Resources

Sharing: Materials submitted by teams as part of the documentation submission will be shared on GitHub repositories for the leagues: https://github.com/robocup-junior

Credit: Teams must credit creators of external work and adhere to licensing rules. The focus should remain on personal growth and learning.

1.4.4. Plagiarism Guidelines

External Code Use: Teams are allowed to use external code but must credit the original creators.

Learning Priority: Teams should prioritize learning and not use complete solutions from others. Always pay attention to licensing rules.

1.4.5. Bill of Materials (BOM)

Submission: Teams must submit a BOM (Bill of Materials) listing major components and materials used.

Details: The BOM must include:

- Component name/description (e.g., part number).
- Supplier/source of the component (including PCBs/machined components).
- Status (new/reused).
- Kit or custom-built.
- Price.

Template: A standardized BOM template will be provided with the league documentation submissions for the international competition.

1.5. Spirit and Behavior

1.5.1. Behavior

All participants are expected to behave themselves and be considerate and polite especially but not only towards other participants, volunteers, referees and organizers of all Junior and Major Leagues as well as the host venue.

1.5.2. Code of Conduct

All organisers, volunteers, team members, mentors, supporters and visitors must abide by the RoboCup Federation Code of Conduct. Any instances where, a situation occurs that does not meet the code of conduct must be reported to a RoboCup Federation organisation member and will be investigated.

1.5.3. Mentoring and Onsite Assistance

Support from other teams, mentors, teachers, parents, sponsors, internet communities etc. is a core part of how teams learn and grow.

To ensure fair competition and maximize learning it is required that none of the support they receive does the work of competing for the team. A good indication is the team's ability to explain not only what their robots' components do but also how they do it.

1.5.4. Teams Onsite

- During the competition, only the official team members (maximum 4/5 depending on league) can represent the team at registration, setup-day, and have access to the competition areas for rounds and interviews.
- There must be at least 2 team members on-site, unless a team can present evidence of extenuating circumstances, including proof of travel for other team members. Teams where only one participant presents at the venue will be able to compete, but will not be eligible for finals or awards.
- It is the teams' responsibility to ensure that team member are present at the correct time and location for all scheduled activities.
- Teams are not allowed to communicate with or receive help virtually from external parties with the intention of impacting the team's performance during the competition areas. Virtually communicating includes but is not limited to extended phone calls, video calls, remote desktop control etc.
- Any team found to be in breach of these rules may be subject to disciplinary action.
- Teams are recommended to seek help from other teams, or organizers if they are struggling with any issues onsite.

1.5.5. Violations

Teams, Team Mentors/Supporters or Team Members that repeatedly conduct themselves in an unacceptable way or in violation to the General or League Rules may be disqualified from the tournament and asked to leave the venue.

2. Code of Conduct

2.1. Spirit

1. It is expected that all participants (students and mentors alike) respect the aims and ideals of RoboCupJunior as set out in our mission statement.
2. The volunteers, referees, and officials will act within the event's spirit to ensure the competition is competitive, fair, and, most importantly, fun.
3. **It is not whether you win or lose but how much you learn that counts!**

2.2. Fair Play

1. Robots that cause deliberate or repeated damage to the field will be disqualified.
2. Humans who cause deliberate interference with robots or damage the field will be disqualified.
3. It is expected that all teams aim to participate fairly.

2.3. Behavior

1. Each team is responsible for verifying the latest version of the rules on the RoboCupJunior Official website and additional clarifications/corrections on the official forum made by the RoboCupJunior Rescue Committee before the competition.
2. Participants should be mindful of other people and their robots when moving around the tournament venue.
3. Participants are not allowed to enter setup areas of other leagues or teams unless explicitly invited to do so by team members.
4. Teams will be responsible for checking updated information (schedules, meetings, announcements, etc.) during the event. The RoboCupJunior Rescue Committee will provide updated information on notice boards in the venue, the local competition website, or the RoboCupJunior website if possible.
5. Participants and their companions who misbehave may be asked to leave the venue and risk being disqualified from the tournament.
6. Referees, officials, tournament organizers, and local law enforcement authorities will enforce these rules equally to all participants.
7. Teams are expected to be at the venue early on the setup day as important activities will occur. These activities include but are not limited to registration, participation raffle, interviews, captains, and mentor's meetings, among others.

2.4. Mentors

1. Non-team members (mentors, teachers, parents and other family, chaperones, translators, and other adult team members) are not allowed in the student work area.
2. Mentors are not permitted to be involved in building, repairing, or programming their team's robots before and during the competition.
3. In the first instance, mentor interference with robots or referee decisions will result in a warning. If this behavior recurs, the team could face a possible elimination from the tournament.
4. Robots have to be the work of the students. Any robot that appears identical to another robot may be prompted for re-inspection.

2.5. Ethics and Integrity

1. Fraud and misconduct are not condoned. Fraudulent acts may include the following:

a. Mentors working on the software or hardware of student's robot(s) during the competition.

b. More experienced/advanced groups of students may provide advice but should not do the work for other groups. Otherwise, the team risks being disqualified.

2. RoboCupJunior reserves the right to revoke an award if fraudulent behavior is proven after the award ceremony occurs.
3. Suppose it is evident that a mentor intentionally violates the code of conduct and modifies and works on the student's robot(s) during the competition. In that case, the mentor will be banned from future participation in RoboCupJunior competitions.
4. Teams that violate the code of conduct can be disqualified from the tournament. Disqualifying a single team member from further participation in the tournament is also possible.
5. Referees, officials, tournament organizers, and local law enforcement authorities will give a team a warning in less severe cases of violations of the code of conduct. A team can be disqualified immediately without warning for severe or repeated violations of the code of conduct.

2.6. Sharing

1. The spirit of world RoboCup competitions is that teams should share technological and curricular developments with other participants after the tournament. Sharing furthers the mission of RoboCupJunior as an educational initiative.
2. The RoboCupJunior Rescue Committee may publish developments on the RoboCupJunior website after the event.
3. Participants are strongly encouraged to ask questions to their fellow competitors to foster a culture of curiosity and exploration in the fields of science and technology.

3. Field

3.1. Description

1. The field comprises modular tiles, which the organizers can use to make an endless number of courses for the robots to traverse.
2. The field will consist of 30 cm x 30 cm tiles with different patterns. The organizers will not reveal the final selection of tiles and their arrangement until the day of the competition. Competition tiles may be mounted on a hard-backing material of any thickness.
3. There will be a minimum of 8 tiles in a competition field, excluding the start tile and the evacuation zone.
4. There are different tile designs (teams can find examples under Section 3.3, "Line").

3.2. Floor

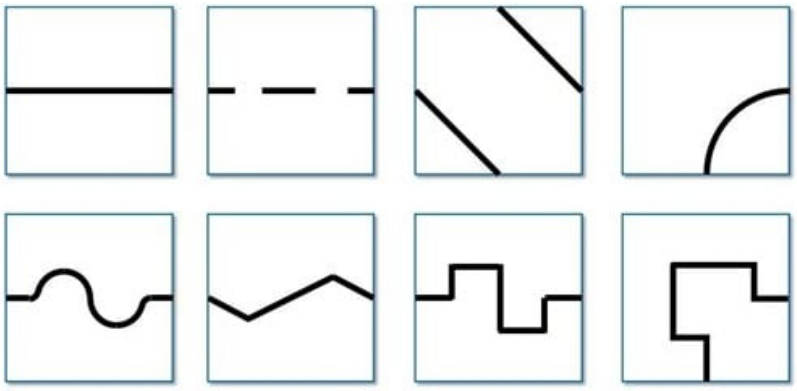
1. The floor is white. The floor may be either smooth or textured (like linoleum or carpet) and may

have steps of up to 3 mm in height between tiles. Due to the nature of the tiles, there may be a step or gaps in the construction of the field.

2. Competitors should be aware that tiles may be mounted on thick backing or raised above the floor, which may make it difficult for a robot to return to the course (field) if it leaves the course. No provision will be made to assist a robot in returning to the field if it drives off the field.
3. Robots must be designed to navigate under tiles that form bridges over other tiles. Tiles placed above other tiles will be supported by pillars at tile corners with a square cross-section of maximum 25mm x 25mm, making each tile entrance 25 cm. The minimum height (space between the floor and the ceiling) will be at least 25 cm.

3.3. Line

1. The black line, 1-2 cm wide, may be made with standard electrical insulating tape or printed onto paper or other materials. The black line forms a path on the floor. (The grid lines indicated in the drawings below are for reference only, and competitors can expect tiles to be added or omitted.)
2. Straight sections of the black line may have gaps with at least 10 cm of the straight line before each gap as measured from the shortest portion of the straight part of the line. The length of a gap will be no more than 10 cm.
3. The arrangement of the tiles and paths may vary between rounds.
4. The line will be at least 10 cm away from the edges of the field and elevated tiles, the pillars that support ramps or the floor raised by the ramp, walls, and obstacles that do not lie ahead of the robot's path.
5. The line will end the entrance of the evacuation zone with a 25 mm x 250 mm strip of silver tape. (see 3.7.3)



3.4. Checkpoints

1. A checkpoint is a tile in which a robot will be manually placed back when a lack of progress (see Section 5.5, "Lack of Progress") occurs.
2. Checkpoints will not be located on tiles with scoring elements.
3. The start tile is a checkpoint where the robot can restart.

4. A checkpoint marker is a marker that indicates for humans which tiles are checkpoints. A disk with 5 mm to 12 mm thickness and up to 70 mm in diameter has been used frequently. Still, it can be different depending on the organizer.
5. The field designers will predetermine the number of checkpoints and their locations.

3.5. Speed Bumps, Debris, and Obstacles

1. The maximum size of a speed bump can be the size of a tile (30 cm x 30 cm) and will have a height of 1 cm or less and be white. When the speed bump is placed over any black line, the overlap between the speed bump and the black line will be colored black. The organizers will fix speed bumps on the floor.
2. Speed bumps may also be placed anywhere in the evacuation zone. Speed bumps in the evacuation zone are not scored.
3. A piece of debris will have a maximum height of 3 mm. The organizers will not fix it to the floor. The debris consists of small materials such as toothpicks, small wooden dowels, etc. There may be overlapping debris.
4. Obstacles may include bricks, blocks, weights, and other large, heavy items. Obstacles will be at least 15 cm high and can be fixed to the floor.
5. An obstacle will not occupy more than one line or tile.
6. A robot is expected to navigate around obstacles. The robot may move obstacles, but obstacles may be very heavy or fixed to the floor. Obstacles will remain where they were moved to, even if that prevents the robot from proceeding.
7. Outside of the evacuation zone, obstacles will not be placed closer than 25 cm from the wall, the edge of the field (including edges of tiles that are elevated by ramps) and inclined tiles.
8. In the evacuation zone, obstacles may be placed anywhere with at least 10 cm away from the wall and 25 cm away from the Evacuation Point. Obstacles in the evacuation zone are not scored.

3.6. Ramps

1. Tiles will be used as ramps to allow the robots to 'climb' up and down from different levels.
2. Ramps will not exceed an incline of 25 degrees from the horizontal.
3. The ramp points will be awarded for each individual ramp tile instead of the entire ramp.
4. The line along the ramps can contain gaps, speed bumps, debris, and obstacles.
5. The ramp must NOT have a drop-off immediately following a rise section, creating a peak-line structure or vice versa.

3.7. Evacuation Zone

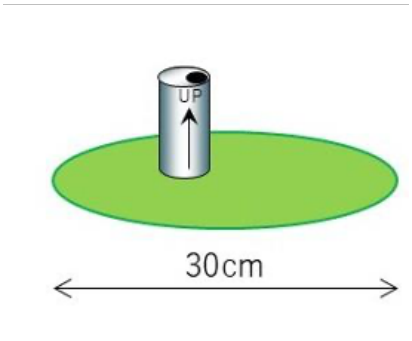
1. The black line will end at the entrance of the evacuation zone.
2. The evacuation zone is 120 cm by 90 cm with walls around the four sides at least 10 cm high and of

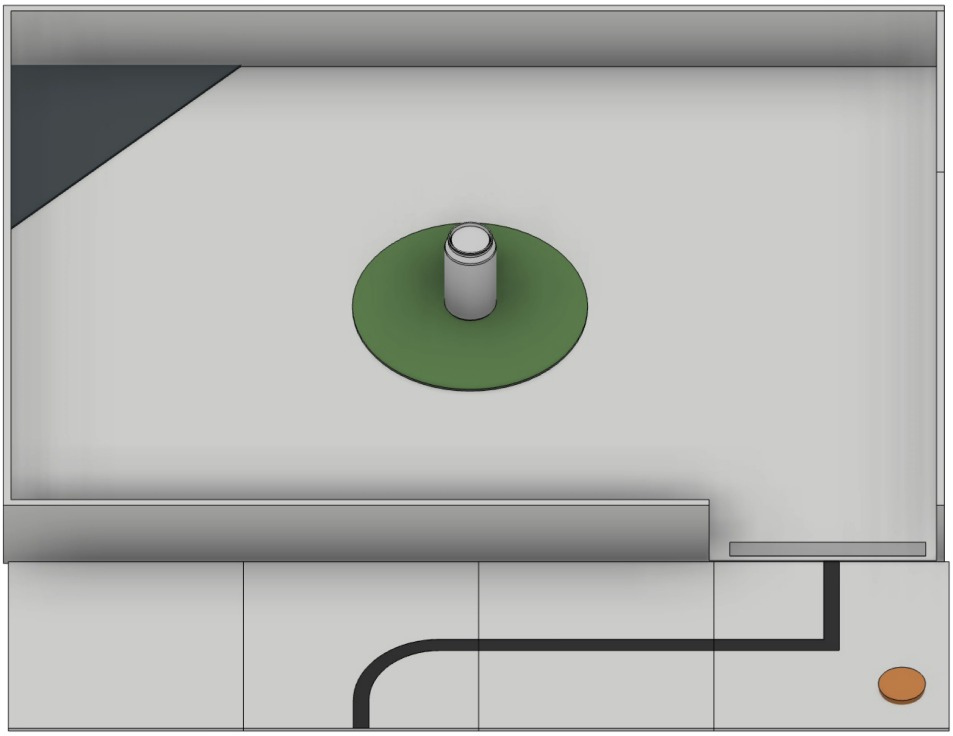
any color (except for red, green, and black). The posts joining the walls of the evacuation zone can be of any color (except for red, green, and black).

3. At the entrance to the evacuation zone, there is a 25 mm × 250 mm strip of reflective silver tape on the floor.
4. The organizers may place an obstacle inside the evacuation zone.
5. There is a victim area within the evacuation zone. The victim area is a green circle with a diameter of 30 cm.
6. There is at least one safe evacuation point in the evacuation zone. The evacuation point is a right-angled triangle measuring 30 cm × 30 cm, made of a flat, thin black board or paper with a thickness of 3 mm or less.
7. The referee can place the evacuation points in any non-entry corner.
8. After a Lack of Progress (see Section 5.5, “Lack of Progress”), the referee may place the evacuation points in new corners.
9. The organizers will fix the evacuation points to the floor. Still, teams should be prepared for slight movements in the evacuation points.

3.8. Victims

1. Victim(s) must be placed entirely within the victim area and may be positioned anywhere inside it.
2. The organizers must place the victim area at least 10 cm away from all walls and from the edge of the evacuation point.
3. A victim is represented by a soft drink can. The size should be between 300 ml and 400 ml (approximately 12 oz), and it is recommended to use the most common type of soft drink can in the region. Its weight is between 300 g and 400 g (approximately 12 oz), too. The victim is covered with reflective silver material and is electrically conductive.
4. The number of victims may be decided by the competition organizer.
5. If a victim is knocked down by a robot, it must remain in place unless the team captain declares a Lack of Progress. After the Lack of Progress is declared, the referee will restore the victim to its original upright position at its initial location. (see Section 5.5, “Lack of Progress”).





3.9. Environmental Conditions

1. The environmental conditions at a tournament may differ from those at home. Teams must come prepared to adjust their robots to the conditions at the venue.
2. Lighting and magnetic conditions may vary in the rescue field.
3. The field may be affected by magnetic fields (e.g., under-floor wiring and metallic objects). Teams should prepare their robots to handle such interference.
4. The field may be affected by unexpected lighting interference (e.g., camera flash from spectators). Teams should prepare their robots to handle such interference.
5. All measurements in the rules for items provided by the organizers (such as the field) are subject to a ±10% tolerance.

4. Robots

4.1. Control

1. Robots must be controlled autonomously. Using a remote control, manual control, or passing information (by external sensors, cables, wirelessly, etc.) to the robot is not allowed.
2. Robots must be started manually by the team captain.
3. Any pre-mapped type of dead reckoning (movements preprogrammed based on known locations or placement of features in the field) is prohibited.
4. Robots must not damage any part of the field in any way.

4.2. Construction

1. Any robot kit or building blocks, either available on the market or built from raw hardware, may be used as long as the design and construction of the robot are primarily and substantially the students' original work.
2. Teams are not permitted to use cameras or vision-based recognition devices or commercially produced robot kits or sensors components specifically designed or marketed to complete any single primary task of RoboCupJunior Rescue. Robots that do not comply will face immediate disqualification from the tournament. If there is any doubt, teams should consult the RoboCupJunior Rescue Committee before the competition.
3. Robots may incur damage by falling off the field, making contact with another robot, or contacting field elements. The organizer cannot anticipate all potential situations where damage to the robot may occur. Teams should ensure that all active elements on a robot are adequately protected with resistant materials. For example, teams must protect electrical circuits from all human contact and direct contact with other robots and field elements.
4. When batteries are transported, moved, or charged, it is strongly recommended that safety bags be used. Reasonable efforts should be made to ensure that robots avoid short circuits and chemical or air leaks.
5. Robots must be equipped with a handle that is to be used to pick them up during the scoring run.
6. Robots must be equipped with a single physical binary switch/button (with exception of buttons that are a part of a commercial controller), clearly visible to the referee, for starting the robot at the beginning of the run and when a lack of progress occurs. Procedure performed after Lack of progress occurs can only include this button and at most one more switch for cutting the power. The team has to notify the referee about its Lack of progress procedure before each scoring run, and only this procedure is allowed to be performed after a Lack of progress (see Section 5.5, “Lack of Progress”).
7. The robot must be equipped with an LED to obtain the Exit bonus when leaving the Evacuation Zone. The LED must be installed so that it is easily visible to the referee from any position. The LED must remain off except when it is lit to indicate the Exit.
8. Robots like drones or hovercrafts are prohibited in the challenge due to safety reasons.

4.3. Team

1. Each team must have only one robot on the field.
2. Each team must comply with the regulations set by the regional organizers regarding the number of team members and the age of each member.
3. Each team member must explain their work and have a specific technical role.
4. A student can be registered on only one team across all RoboCupJunior leagues/sub-leagues.
5. A team can only participate in one league/sub-league across all RoboCupJunior leagues/sub-leagues.
6. Mentors/parents are not allowed to be with the students during the competition. The students will have to govern themselves (without a mentor’s supervision or assistance) during the long stretch of

hours at the competition.

4.4. Inspection

1. A panel of referees will scrutinize the robots before the start of the tournament and at other times during the competition to ensure that they meet the constraints described in these rules.
2. Using a robot similar to another team's robot from a previous year or the current year is illegal.
3. The team's responsibility is to have their robot re-inspected if modified at any time during the tournament.
4. Students will be asked to explain their robot's operation to verify that its construction and programming are their own work.
5. Students will be asked about their preparation efforts. The RoboCupJunior Rescue Committee may request them to answer surveys and participate in recorded interviews for research purposes.
6. All teams must complete a web form before the competition if requested by the organizers. This is to help the judges prepare better for the interview. The organizers will instruct teams in advance on how to submit the form.
7. All teams must submit their source code, if requested. However, the organizers will not share it with other teams without the team's permission.

4.5. Violations

1. Any violations of the inspection rules will prevent the offending robot from competing until modifications are made, and the robot passes inspection.
2. Teams must make modifications within the schedule of the tournament, and teams cannot delay tournament play while making modifications.
3. Suppose a robot fails to meet all specifications (even with modifications). In that case, it will be disqualified from that game (but not from the tournament).
4. No mentor assistance is allowed during the competition. (See Section 2, "Code of Conduct")
5. Any rule violations may be penalized by disqualification from the tournament or the game or result in a loss of points at the discretion of the referees, officials, or RoboCupJunior Rescue Committee.

5. Play

5.1. Pre-game Practice

1. When possible, teams will have access to practice fields for calibration and testing throughout the competition.
2. Whenever there are dedicated independent fields for competition and practice, it is at the organizers' discretion if testing is allowed on the competition fields.

5.2. Humans

1. Teams should designate one of their members as 'captain' and another as 'co-captain'. Only these two team members will be allowed access to the competition fields unless directed by a referee. Only the captain can interact with the robot during a scoring run.
2. The captain can move the robot only when they are told to do so by a referee.
3. Other team members (and any spectators) within the vicinity of the competition field must stand at least 150 cm away from the field unless directed by a referee.
4. No one is allowed to touch the fields intentionally during a scoring run.
5. All pre-mapping activities will immediately disqualify the robot for the round. Pre-mapping is the act of humans providing the robot with information about the field (e.g., location of the bstacles and the entrance to the evacuation zone, the directions for avoiding obstacles, the layout of black lines, or the placement of victims inside the evacuation zone, etc...) before the game.

5.3. Start of Game

1. Each team has a maximum of 6 minutes for a game. The game includes the time for calibration and the scoring run.
2. Calibration is taking sensor readings and modifying the robot's programming to accommodate such sensor readings. Calibration does not count as pre-mapping.
3. The scoring run is defined as the time when the robot is moving autonomously to navigate the field, and the referee will record the scores.
4. A game begins at the scheduled starting time, whether or not the team is present or ready. Start times will be posted around the venue.
5. Once the game has begun, the robot is not permitted to leave the competition area.
6. Teams may calibrate their robot in as many locations as desired on the field, but the clock will continue to run. Robots are not permitted to move on their own while calibrating.
7. Once a team is ready to start a scoring run, the team must notify the referee. To start a scoring run, the robot is placed on the start tile of the course, as indicated by the referee. Once a scoring run has begun, no more calibration is permitted, including changing code/code selection.
8. Teams may choose not to calibrate the robot and immediately start the scoring run instead.
9. Individual tiles and other scoring elements may be removed, added, or changed when the robot starts moving; to prevent teams from pre-mapping the layout of the fields. These changes may happen based on a die rolled by the referee or with another method of randomization announced by the organizers. For a particular field during a round, the referee will ensure the di□culty of the field will be kept similar, and the maximum points are constant.

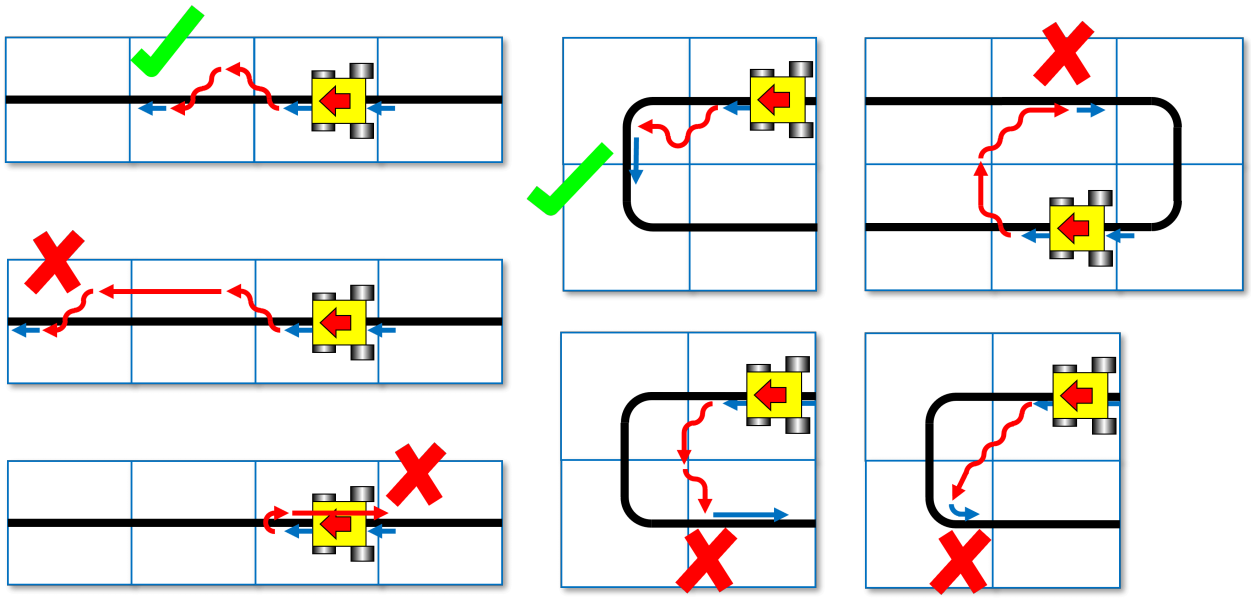
5.4. Scoring Run

1. Robots will start behind the joint of the start tile and the subsequent tile along the course. The referee will check the correct placement.

2. Modifying the robot during a scoring run is prohibited, which includes remounting parts that have fallen off.
3. Any parts the robot loses intentionally or unintentionally will be left in the field until the run is over. Team members and referees cannot move or remove elements from the field during a scoring run.
4. Teams cannot give their robot any information about the field. A robot is supposed to recognize the field elements by itself.
5. The robot must follow the course completely to enter the evacuation zone and then out of the evacuation zone towards the evacuation zone.
6. The robot has reached a tile when more than half the robot is within that tile when viewed from above and the robot is actively following the line at that point in time.

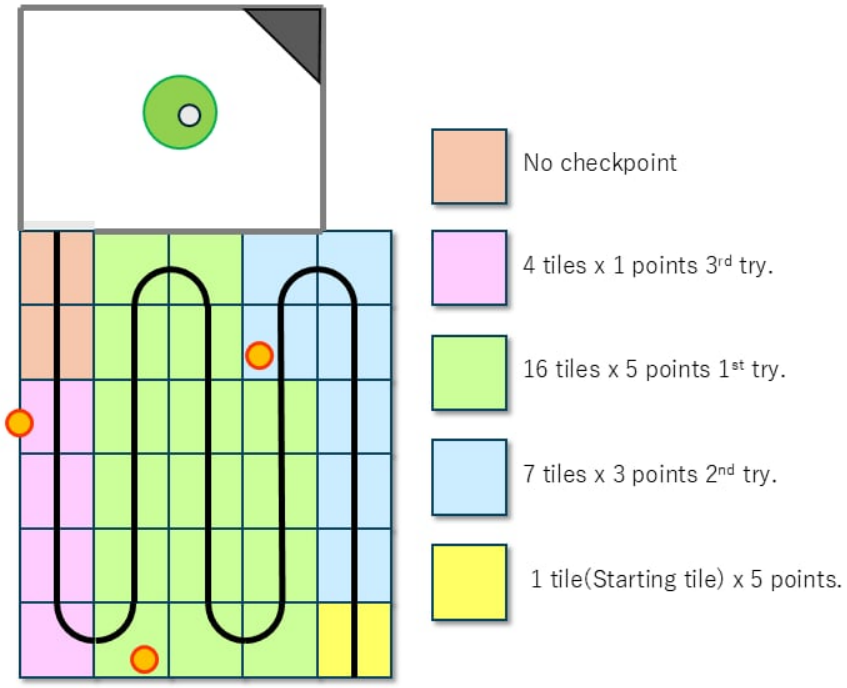
5.5. Lack of Progress

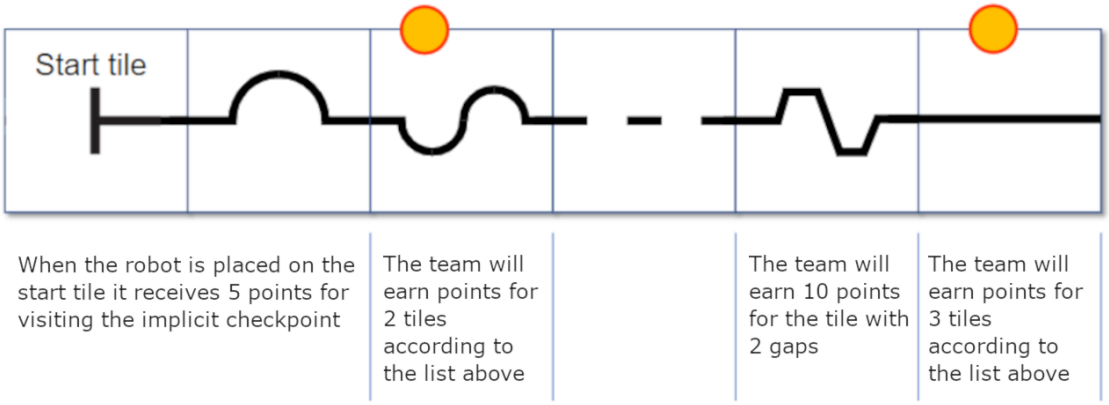
1. A lack of progress occurs when:
   a. a team captain declares a lack of progress.
   b. a robot loses the black line without regaining it by the next tile in the sequence (see figures at the end of the section).
   c. a robot reaches a line that is not in the intended sequence.
   d. a robot exit from the evacuation zone.
2. If a lack of progress occurs, the robot must be positioned on the previous checkpoint tile facing the path towards the evacuation zone and checked by the referee.
3. After a lack of progress, only the Lack of progress procedure explained to the referee before the run start is allowed to be performed (see Section 4.2, “Construction”).
4. There is no limit to the lack of progress within a round.
5. After three failed attempts to reach a checkpoint, a robot is allowed to proceed to the next checkpoint. The team captain may make further attempts at the course to earn additional points from scoring elements that have not already been earned before reaching the next checkpoint.
6. If a lack of progress occurs in the evacuation zone, unrescued victims (including those that have rolled) shall be returned to any position within the victim area. Rescued victims are not returned. These positions are approximate and not required to be exact. Teams are not allowed to make any requests or complaints regarding the placement of the victims.



5.6. Scoring

1. A robot is awarded points for successfully navigating each tile with hazards (gaps in the line, speed bumps, ramps, and obstacles). Points are awarded per hazard when the robot has reached the next tile in sequence. Point allocations are 10 points per tile with one or more gaps, 10 points per tile with one or more speed bumps, 10 points per ramp. 10 points per obstacle.
2. Failed attempts at navigating hazards in the field are defined as a Lack of Progress (see Section 5.5, “Lack of Progress”). However, if scoring elements are placed on two consecutive tiles and the robot is unable to reach the second tile due to its difficult placement, then successfully reaching the third tile will count as successfully achieving the scoring elements on both the first and second tiles simultaneously.
3. When a robot reaches a checkpoint tile, it will earn points for each tile it has passed since the previous checkpoint. The points per tile depend on how many attempts the robot has made:
    - 1st attempt = 5 points/tile
    - 2nd attempt = 3 points/tile
    - 3rd attempt = 1 point/tile
    - Beyond the 3rd attempt = 0 points/tile

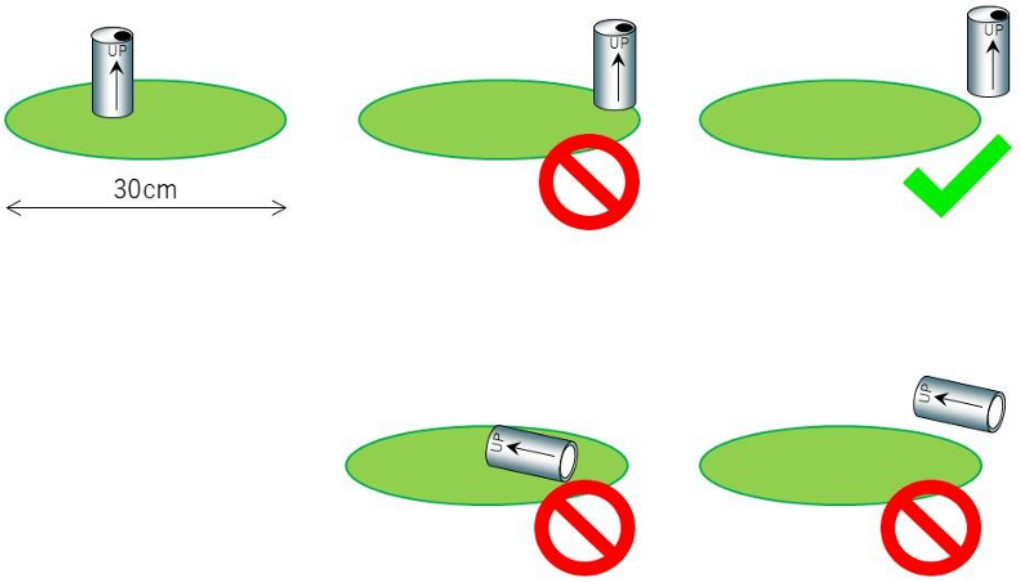




4. Each gap, speed bump, ramp, and obstacle can only be scored once per intended direction through the course. Points are not awarded for subsequent attempts through the course.
5. The referees will not count any hazards in the evacuation zone towards additional points.
6. No duplicate rewards. For example, suppose a robot successfully crosses a tile with speed bumps multiple times. In that case, only one successful speed bump crossing will be rewarded per tile. The same result applies to all other scoring rules.
7. Victim Detection

   Points shall be awarded for each successful victim detection within the evacuation zone. Each successful detection shall be worth 10 points.

   The robot shall completely remove the victim from the Victim area. The victim shall be considered detected only after it is fully outside the Victim area.

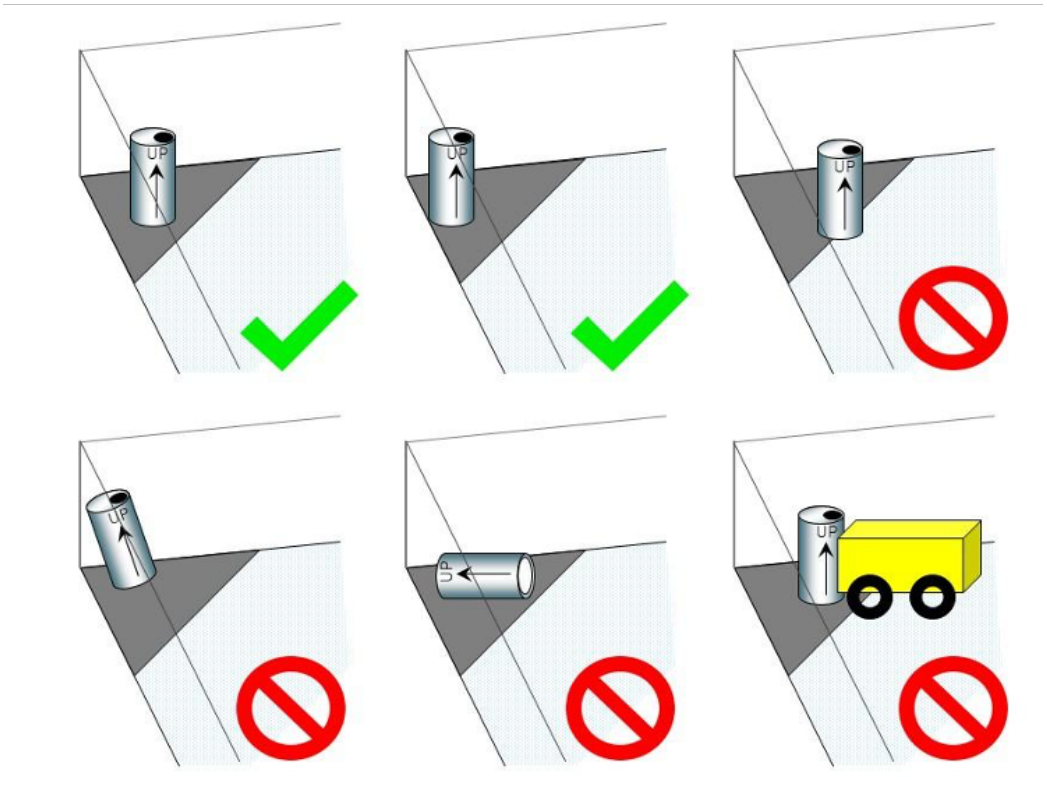


8. Victim Rescue

   Points shall be awarded for each successful victim rescue within the evacuation zone.

   A successful rescue. A robot is awarded 30 points foe each victim successfully rescue when all of the following conditions are met:

   a. The robot has completely carried the victim into the Evacuation Point.
   b. The victim is placed in the correct orientation and is standing on its own.
   c. The robot is completely separated from the victim.



9. Exit Bonus

   A successful exit will be awarded 5 points if the robot meets the following requirements:

   a. a robot must have completely entered the Evacuation Zone at least once.

   b. a robot must completely exit the Evacuation Zone.

   c. a robot must remain completely stationary for 5 seconds.

   d. a robot must turn on an LED for 5 seconds. (The color of the LED does not matter.)

5.7. End of Game

1. A team may elect to stop the game early at any time. In this case, the team captain must indicate the team's desire to terminate the game to the referee. The team will be awarded all points earned up to the call for the end of the game. The referee will stop the time at the end of the game, which will be recorded as the game time.
2. The game ends when:
   a. The 6 minutes of allowed game time expires
   b. The team captain calls the end of the game.
   c. When the Exit Bonus is awarded.

6. Competition

The competition format and the inclusion of elements like rubrics based scoring may vary in local, regional and super-regional competitions. Please refer to the respective organiser for details.

6.1. Rounds & Scoring

1. The competition will consist of multiple rounds of which the worst one or more will be omitted from the final score. The worst round is defined by the lowest normalized field score of the team.
2. The field score for every round will be normalized with the score of the best team of that round:

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(NORMALIZED FIELD SCORE) = (FIELD SCORE) / (BEST FIELD SCORE)
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3. The normalized field scores will be used to calculate the mean. The worst round(s) will not be considered here:

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(MEAN OF NORMALIZED FIELD SCORES) = (SUM OF NORMALIZED FIELD SCORES EXCLUDING OMITTED
ROUNDS) / (NUMBER OF ROUNDS - NUMBER OF OMITTED ROUNDS)
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7. Open Technical Evaluation

7.1. Description

1. The organizers will evaluate your technical innovation during a dedicated time frame. All teams need to prepare for an open display during this time frame.
2. Judges will circulate and interact with the teams. The Open Technical Evaluation is intended to be a casual conversation with a question-and-answer atmosphere.
3. The Open Technical Evaluation's main objective is to emphasize the innovation's ingenuity. Innovative may mean technical advances compared to existing knowledge or an out-of-the-ordinary, simple but clever solution to existing tasks.

7.2. Evaluation Aspects

1. A standardized rubric system will be used, focusing on:
    - creativity
    - cleverness
    - simplicity
    - functionality
2. Your 'work' can include (but is not limited to) one of the following aspects:
    - creation of your own sensor instead of a pre-built sensor
    - creation of a 'sensor module' which is comprised of various electronics resulting in a self-contained module to provide a specific functionality
    - creation of a mechanical invention that is functional but out of the ordinary
    - creation of a new software algorithm for a solution

7.3. Documents

1. Teams must provide documents that explain their work. Each invention must be supported by concise but clear documentation. The documents must show precise steps towards the creation of the invention.
2. The deadline for delivering the documents is scheduled for 3 weeks before the first day of the competition through an online form.
3. Documents must include one Technical Description Paper (TDP), one Poster. Teams should be prepared to explain their work.
4. All teams must submit their TDP before the competition. The TDP is a public document that will be shared with the community. The competition organizer will ask the team to fill out the web form or ask to submit a PDF file. All teams must strictly follow the guidance on the web form or, in the case of PDF submissions, strictly follow the template provided. If a team does not follow this guidance /

template (including but not limited to the different sections, fonts, sizes and lengths) the score for the document will be 0 and is not going to be evaluated. A template for the TDP and rubrics are available on the RoboCupJunior Rescue Community Website.

5. All teams must submit a Poster file before the competition and bring a physical Poster to the competition venue. The Poster is a public document. The Poster is a public document. The Poster must include, but is not limited to, the team's name, region, league, robot description, robot capabilities, controller, programming language used, sensors included method of construction, development time, and material costs. A guide for the poster format is available on the RoboCupJunior Rescue Community Website.

7.4. Sharing

1. Teams are encouraged to review others' posters, TDPs and presentations.
2. Teams awarded certificates must post their documents and presentation online when the tounament organizer asks.

8. Conflict Resolution

8.1. Referee and Referee Assistant

1. All decisions during gameplay are made by the referee or the referee assistant, who are in charge of the field, persons, and objects surrounding them.
2. During gameplay, the decisions made by the referee or the referee assistant are final.
3. After gameplay, the referee will ask the captain to sign the score sheet. Captains will be given a maximum of 1 minute to review the score sheet and sign it. By signing the score sheet, the captain accepts the final score on behalf of the entire team. In case of further clarification, the team captain should write their comments on the score sheet and sign it.

8.2. Rule Clarification

1. If any rule clarification is needed, please contact the International RoboCupJunior Rescue Committee through the RoboCupJunior Forum.
2. If necessary, even during a tournament, a rule clarification may be made by members of the International RoboCupJunior Rescue Committee.

8.3. Special Circumstances

1. If particular circumstances, such as unforeseen problems or capabilities of a robot occurs, rules may be modified by the RoboCupJunior Rescue Committee Chair in conjunction with available committee members, even during a tournament.
2. Suppose team captains/mentors do not attend the team meetings to discuss problems, and the resulting rule modifications described at 1.. In that case, the organizers will understand that they

agreed and were aware of the changes.