RoboCupJunior International 2025 General Rules

These rules apply to the international RoboCupJunior competition. However, regional, super-regional, 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/

Team requirements

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.

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

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

Age Requirements

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

Junior Mentors and Parent/Chaperones: Must be 19 years or older as of the competition start date.

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.

Robot Requirements

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 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.

Safety and Power Requirements

Electrical Power:

- Robots must not use mains electricity.
- Maximum allowed voltage: 48V DC or 25V AC RMS.
- 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 the event.

Documentation and Sharing requirements

RCJ 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 RCJ 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.

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.

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.

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.

Bill of Materials (BOM)

Submission: Teams must submit a BOM 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.

Spirit and Behavior

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.

Mentoring, Sponsorships and Component Reuse

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.

Onsite help

Teams are only allowed to receive help from other teams during the competition. To this end only student team members are allowed into the student work area except with temporary organizer permission. Anyone else is forbidden from touching the robots or their code, especially for repairs, changes, programming.

Violations

Teams that repeatedly conduct themselves in an unacceptable way may be disqualified from the tournament and asked to leave the venue.