RoboCup Junior Australia

General Rules 2026

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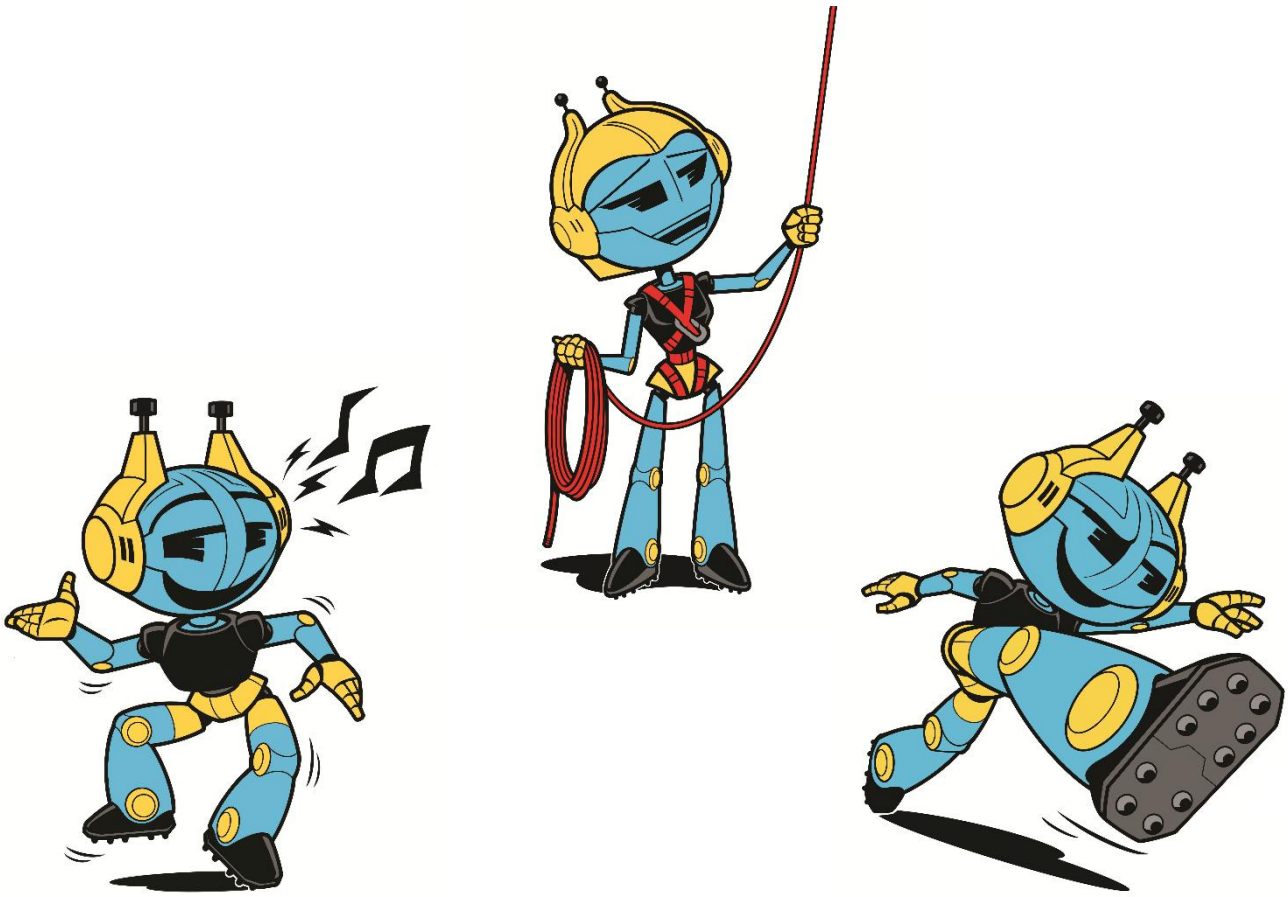

RoboCup Junior Australia Executive Committee

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Rescue Maze Challenge Coordinator	Tim Ronchi (Victoria)
Soccer Challenge Coordinator	Marc Cooke-Russell (Australian Capital Territory)

For State and Territory enquiries, contact information can be found on the RCJA Website:

ACT NSW NT QLD SA TAS VIC WA

Preface

Spirit

It is expected that all participants, students and mentors, will respect the aims and ideals of RoboCup Junior as set out in our mission statement. In turn, the volunteers, referees and officials will act within the spirit of the event to ensure the competition is competitive, fair and most importantly, fun. “It is not whether you win or lose, but how much you learn that counts.”

Sharing

It is the overall desire of RoboCup Junior competitions that any technological and curricular developments will be shared with other participants after the competition. Any developments including new technology and software examples, may be published on the RoboCup Junior website after the event, furthering the mission of RoboCup Junior as an educational initiative. Participants are strongly encouraged to ask questions of their fellow competitors to foster a culture of curiosity and exploration in the fields of science and technology.

Local Variations

These rules will be in use for the Australian National Championships for the titled year. State and Regional events may implement minor variations with respect to age groups, divisions and judging. These variations will be communicated to the participants through email and/or on their relevant website prior to the state or regional competition.

Notes/Advice vs. Rules

This document may include notes/advice to participants and mentors, plus rules that are firm. This has been done to remove ambiguity. There is a notation to indicate whether the content of this document is to be read as a note/advice or as a rule. Advice is noted in green. Rule changes for the new year are noted in red.

Change Log

Revision	Change(s) Made
26.0	Initial release for the season. Key changes from 2025 include: • Clarification of team composition and requirement of team mentor (see section 1.1) • Addition of rule around laser class used in robots (see section 2.4.1.6) • Addition of PPE requirements for students using tools (see section 2.5.3) • Added clarification that non-team members can't communicate with a team during a scoring run (see section 2.6.8) • Added clarification that any commercial software must be open-source modified or trained/integrated to be used (see section 4.4.3) • Added section outlining environmental conditions and considerations for teams (see section 5) • Rule added encouraging mentors to ensure teams are registered in the most appropriate division for their ability level (see section 7.1.2)

Table of Contents

Table of Contents 4
1 Composition of a Team 5
1.4 International Teams 5
2 Safety 6
2.1 Battery Safety Preface 6
2.2 Battery Safety for all Robots 6
2.3 Battery Safety for Non Off-The-Shelf Robots 6
2.4 Safe Robot Design 7
2.5 Tools & Equipment 7
2.6 Venue Protocol & Behaviour 7
3 Disputes & Protests 8
3.1 Decision Finality 8
3.2 Rule Clarification 8
3.3 Special Circumstances 8
3.4 End of Game Score Review (Excluding OnStage) 8
3.5 Grievance Process (Excluding OnStage) 8
3.4 Protests (OnStage only) 9
4 Originality and Permitted Technology 9
4.1 Mentor Assistance 9
4.2 Outside Assistance 9
4.3 Design and Program Originality 9
4.4 Permitted Technology 10
5 Sharing 10
6 Code of Conduct 11
6.1 Spirit 11
6.2 Fair Play 11
6.3 Ethics and Integrity 11

1 Composition of a Team

1.1 Teams participating at the RoboCup Junior Australian Open (often referred to as 'Nationals') should consist of two to four students and one mentor over 19 years of age.

Note: An individual participant is allowed to compete at the RoboCup Junior Australian Open as a Team of one only once. To do so the individual must seek approval from the Event Coordinator. If a team can only afford, or due to extenuating circumstances, cannot send more than one member to an event, then this is allowed as the Journal/Logbook/Technical Description Paper will show that they have been part of a team.

1.2 The minimum and maximum number of students in a team may vary at Regional and State Events. Check your State or Territories web page for further details.

1.3 Team members may be any person who is studying at a recognised Primary or Secondary education provider, or of an age where a person would be typically doing so.

1.4 International Teams

1.4.1 An International Team is defined as a team where one or more team members usually reside internationally **and** do not attend a registered primary or secondary education provider in Australia.

1.4.2 A Local Team is defined as a team where all team members usually reside in Australia, **or** all team members attend a registered primary or secondary education provider in Australia.

1.4.3 Local Teams and International Teams are welcome to participate in RoboCup Junior Australia events subject to meeting requirements in Rules 1.1-1.3. International Teams cannot use RoboCup Junior Australia events to qualify for international events such as the annual RoboCupJunior International event.

1.4.4 Where an International Team is ranked 1st to 3rd in their division, they will be awarded this as an equal placing with the next best ranking other teams. Where the division has a finals process, this may mean additional teams are taken into the finals process as required to have a complete set of placings. Where the division has a knockout finals process, other factors may be used to determine the equally placing teams' final ranking.

Example A

Team I is an International Team. At the conclusion of the Primary Rescue Line preliminary rounds, Team I is ranked first. Typically, the top three teams would be taken into the Head 2 Head Finals Round. To ensure there are sufficient teams for a complete set of placings, four teams would be taken instead.

At the conclusion of the Head 2 Head Finals Round, Team I is ranked second. With Team A first, Team B third and Team C fourth. Therefore, the final placings would be 1st – Team A, 2nd – Team B & I, 3rd – Team C.

Example B

Team I is an International Team. At the conclusion of the Standard League Soccer Round Robin, Team I makes it into the finals. Team I plays well in the finals, and comes Second in the Grand Final. The finals placings would be 1st – Grand Final winner, 2nd – Team I & Third Place Playoff winner, 3rd – Third Place Playoff runner up. In the event there were to be multiple teams meeting the criteria in rule 1.4.1 which make it into the finals, other factors may be considered to determine the final placings.

1.4.5 Rule 1.4.4 applies mandatorily to the RoboCup Junior Australian Open (often referred to as 'Nationals') and may be adopted for other events at the Event Coordinators discretion.

2 Safety

2.1 Battery Safety Preface

2.1.1 Lithium-based batteries (including but not limited to LiPo (Lithium Polymer) and Li-ion (Lithium-Ion) batteries) are a necessary component of some robots. However, they must be properly stored, charged and used to ensure safety of all event participants. Incorrect use of Lithium-based batteries can result in battery failure, with consequences including combustion, fires and battery explosion.

2.2 Battery Safety for all Robots

2.2.1 Batteries (including their factory fitted leads and connectors) with any physical damage and/or modifications and/or signs of wear or degradation (such as swelling and/or leaking) must not be brought to an event.

2.3 Battery Safety for Non Off-The-Shelf Robots

2.3.1 Lithium-based batteries included with common off the shelf kits such as LEGO NXT, EV3, and Spike Prime, Vex or Makeblock when used with an appropriate and within specification charger are exempt from rule 2.2 and subrules.

2.3.2 The following regulations apply to Lithium-based batteries without a Battery Management System supplied, integrated and packaged with the battery by the Original Equipment Manufacturer (OEM).

2.3.2.1 Lithium-based batteries must be only used in conjunction with commercially produced, dedicated balanced Lithium-based battery chargers that are suitable for the specific chemistry of battery being used.

2.3.2.2 When being transported to or from an event, or when charging or discharging via a suitable battery charger, Lithium-based batteries must be properly stored in commercially produced charging bags or charging boxes.

2.3.2.3 Robots must include the use of appropriately sized fuses or protection circuits to ensure the battery and wiring are protected from over-current, thermal runaway and/or short-circuit events. The fuse must be located as close as reasonably practicable to either battery terminal such that it protects all circuitry coming off the battery.

Note: Information to support teams in complying with these requirements will be published on the RCJA Website by the end of February. In the interim, consider using ceramically housed fuses with a Breaking Capacity of at least 20kA and a Current Rating of 20% to 50% above the operating current of the robot (but below the rated battery current).

2.3.3 Lithium-based batteries must be charged at the lower of either:

2.3.3.1 The manufacturer's recommended charging rate (if available)

2.3.3.2 A maximum charging rate of 1C

Note: The charging rate equivalent of 1C for a given battery can be identified through its capacity. For example, a 1500mAh (1.5Ah) LiPo battery would have a 1C of 1500mA (1.5A), where as a 2200mAh (2.2Ah) LiPo battery would have a 1C of 2200mA (2.2A).

If the manufacturer's recommendations are not available, teams should charge lithium-based batteries at a rate within the range of 0.5C to 1C.

2.3.4 Teams may have a maximum of four Lithium-based batteries per robot

2.3.5 No voltage on a robot may exceed 48V DC or 25V AC RMS at any point and at any time. This voltage refers to the maximum voltage, not the nominal voltage. This includes the maximum voltage within or used by any voltage pumps, regulators, transforms or other component of the robots.

2.4 Safe Robot Design

2.4.1 Robots which are not made from common off the shelf kits such as LEGO NXT, EV3, and Spike Prime, Vex and Makeblock must:

2.4.1.1 Have the battery secured appropriately and properly fastened to the robot, and the battery is protected against impact, pinching, compression and tearing/piercing.

2.4.1.2 Be wired safely, using appropriately sized wires and connectors etc.

2.4.1.3 Have a single switch to isolate the battery that is easily accessible and identifiable by event officials and volunteers.

2.4.1.4 Have no sharp edges or corners, no pinch points and no other hazards

2.4.1.5 Have appropriately sized motors, servos and actuators for the robot's size and function

2.4.1.6 For the safety of participants and spectators, only lasers of class 1 and 2 are allowed.

2.5 Tools & Equipment

2.5.1 All tools and equipment brought into the venue must have a current electrical test and tag label clearly visible.

2.5.2 Participants must be appropriately trained in the use of any tools and equipment they bring to the venue. Participants must be able to use any tools and equipment brought to the venue independently. Mentors may only be able to supervise use of tools and equipment from outside the team setup area.

2.5.3 All participants must be using appropriate personal protective equipment (PPE) when using any tools or equipment that they are trained to use. This should align with your school's health and safety requirements.

2.6 Venue Protocol & Behaviour

2.6.1 All movement and behaviour are to be of a subdued nature within the event venue. Participants should be mindful of other people and their robots & equipment when moving around the event venue.

2.6.2 Participants are not to enter the work area of other teams, unless expressly invited to do so by team members.

2.6.3 Any event attendee, mentor or participant who misbehave may be asked to leave the building and risk being disqualified from the tournament. Mentor or spectators who misbehave risk having teams associated with them disqualified.

2.6.4 No electronic devices may be used for one-way or two-way communication between event participants within the Game Zone, or from outside the Game Zone or vice versa.

2.6.5 Mentors are permitted to attend Team Interviews as **silent** observers. Mentors wishing to do so should advise the Challenge Coordinator of the challenge their team is participating in. Mentors may be required to be escorted to and from the interview by an event official. Mentors must not attempt to influence Interviewers.

2.6.6 Teams will be responsible for checking updated information (schedules, meetings, announcements, etc.) during the event. Update information will be provided via means that may include: notice boards in the event venue,

announcements, email, the event page on the RCJ CMS (Competition Management System) and/or the RoboCup Junior Australia website.

2.6.7 Due to the use of light, colour and camera based sensing as part of robots, the use of flash or artificial lighting equipment as part of photography or videography within the venue is prohibited (to avoid any interference with sensed data).

2.6.8 Non-team members are not permitted to communicate with teams during a scoring round, game or performance.

3 Disputes & Protests

3.1 Decision Finality

3.1.1 All decisions during game play are made by event officials (including judges, scorers, referees, and their assistants) who are in charge of the arena, persons and objects surrounding them.

3.1.2 During game play, the decisions made by event officials are final.

3.1.3 Photographic or Video evidence will not be considered since this cannot be fairly used for all teams.

3.2 Rule Clarification

3.2.1 If any rule clarification is needed, contact the Challenge Technical Committee.

3.2.2 If necessary, even during an event, a rule clarification may be made by members of the Technical Committee and Event Organising Committee.

3.3 Special Circumstances

3.3.1 If special circumstances, such as unforeseen problems or capabilities of a robot occur, rules may be modified by the Event Coordinator and/or Challenge Coordinator in conjunction with available Technical Committee and Organising Committee members, if necessary, even during an event.

3.3.2 Should a team meeting be held during an event to discuss the unforeseen problems or capabilities of a robot, any team who does not attend the meeting will be considered in agreement.

3.4 End of Game Score Review (Excluding OnStage)

3.4.1 At conclusion of game play, event officials will ask the Robot Handler to check the score. The Robot Handler will be given a maximum of 1 minute to review the score sheet. If the robot handler accepts the score this will be noted on the scoring system. By accepting it, the Robot Handler accepts the final score on behalf of the entire team. If there is any dispute this must be noted in writing. The dispute will be noted on the scoring system and the dispute passed to the Challenge Coordinator. The dispute will be managed following the Grievance Process outlined in section 3.5.

Note: End of Game Score Review does not apply to OnStage as OnStage scores are not immediately shown to teams at the conclusion of their performance or interview.

3.5 Grievance Process (Excluding OnStage)

3.5.1 The aim of the grievance process is to ensure the fairest possible outcome for all teams, recognising this is not always possible. The process should be kept with the spirit of the event (i.e. it should be supportive of all people involved and not become adversarial).

3.5.2 Any concerns regarding the recorded score will be adjudicated by the Event Coordinator or Challenge Coordinator (or their representative) based on the recorded recollection.

3.5.3 If further clarification is required the Team(s) and the event official(s) will be consulted separately. Team Mentors may be present in a silent observer capacity only to provide support to their team.

3.5.4 Photographic or Video evidence will not be considered since this cannot be fairly used for all teams.

Note: End of Game Score Review does not apply to OnStage as OnStage scores are not immediately shown to teams at the conclusion of their performance or interview.

3.4 Protests (OnStage only)

3.4.1 Only the Mentor may lodge a protest with the organisers. A protest can only be heard if there is an alleged breach of the rules.

3.4.2 The protest must be made in by completing of the 'Fair Play Form' not more than 30 minutes after the Performance or the Technical Interview and lodging it with the OnStage Performance Coordinator or event coordinator.

3.4.3 The protest will be referred to the OnStage event officials for consideration.

3.4.4 Any protest must include:

3.4.4.1 All relevant facts and any corroborative evidence.

3.4.4.2 The rules that are believed to have been breached.

3.4.5 Photographic or Video evidence will not be considered since this cannot be fairly used for all teams.

Note: Protests only apply to OnStage as teams participating in other challenges review and approved (or dispute) the recorded scores reviewed immediately following conclusion of game play.

4 Originality and Permitted Technology

4.1 Mentor Assistance

4.1.1 Mentors (teachers, parents, chaperones, and other spectators) are not allowed in the team work area. Only registered team members are allowed in the team work area. Mentors are required to remain in a supervisory capacity from outside the team work area.

4.1.2 Mentors are not to repair robots or be involved in the programming of robots. Robots or computers should not need to leave the team work area during the day's game play.

4.1.3 Teams should utilise documents such as a Journal/Logbook/Technical Description Paper to demonstrate originality in their work and submit these via the registration system prior to the event.

4.2 Outside Assistance

4.2.1 Teams who receive assistance from any person who is a mentor, teacher, parent, chaperon or other spectator during an event will be issued a first and final warning. Teams that continue to receive outside assistance risk being disqualified. Mentors risk having all of their participating teams disqualified.

4.3 Design and Program Originality

4.3.1 Teams must have a robot of their own original design and program. Whilst it is normal that there are similarities of the design and/or programming of robots between teams, no two teams may have identical robot designs and/or programs. Any robot that appears to be identical to another robot may be subject to inspection.

4.3.2 Whilst it is expected under Section 5 'Sharing' (and subrules) that teams may share their technological developments (such as designs and programs) with other teams, teams may not directly use designs and programs that has been passed down to them by the teams before them, but should use this knowledge as inspiration, for learning and to further develop their engineering and technological skills.

4.4 Permitted Technology

4.4.1 Any robot kit or building materials may be used providing that the robot fits the specifications, originality and safety requirements documented in these rules, and the Challenge Rules for the Challenge the team is entering.

4.4.2 Robots should be well designed, engineered and constructed. The robot should not fall apart during the event.

4.4.3 Commercial robot kits and open-source software (e.g. camera vision software, etc.) may be used but they must be substantially modified or trained/integrated by the student team members.

Note: Contact the Challenge Coordinator for your challenge if you need any advice.

4.4.3.1 For all Challenges except OnStage:

4.4.3.2 Commercial robot kits that require minimal or no effort to design and construct are not permitted.

4.4.3.3 Commercial robot kits that require minimal or no effort to program are not permitted.

Note: OnStage teams should consider the impact on their performance and/or interview scores when choosing to use commercial robot kits that require minimal or no effort to design and construct and/or program.

5 Environmental Conditions

5.1 RoboCup events are held across a wide range of locations, with varying conditions between competition and practice fields such as lighting and magnetic fields just like you would experience in the real world. Competitors must be prepared to adjust/calibrate their robot to suit these conditions.

5.2 Materials and construction may vary slightly from regional, state and national events. Competitors must be prepared to adjust/calibrate their robot to suit these conditions.

6 Sharing

6.1 In the spirit of RoboCup events globally, it is understood that any technological and curricular developments should be shared with other participants after the event.

6.2 Any developments may be published on the RoboCup Junior Australia website or social media pages after the event.

6.3 Teams, Mentors and Spectators are encouraged to publish positive and respectful footage of highlights on social media platforms such as Facebook, Instagram and LinkedIn, tagging "RoboCup Junior Australia".

6.4 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.

6.5 This furthers the mission of RoboCup Junior Australia as an educational initiative.

7 Code of Conduct

7.1 Spirit

7.1.1 It is expected that all participants (students and mentors alike) will respect the aims and ideals of RoboCup Junior as set out in our mission statement.

7.1.2 Mentors are encouraged to ensure teams are registered in a division that is suitable to their ability level. Teams who are finding a division too easy or hard should be encouraged to change to a more appropriate division.

Note: Contact the Challenge Coordinator for your challenge if you need any advice.

7.1.3 The Volunteers, Referees and Officials will act within the spirit of the event to ensure the event is competitive, fair and most importantly fun.

7.1.4 **It is not whether you win or lose, but how much you learn that counts!**

7.2 Fair Play

7.2.1 Robots that cause deliberate or repeated damage to the arena or interfere with any robots in any way will be disqualified.

7.2.2 Humans or robots that cause deliberate interference with robots or damage to the arena will be disqualified.

7.2.3 It is expected that the aim of all teams is to participate fairly.

7.3 Ethics and Integrity

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

7.3.1.1 Mentors working on the software or hardware of students' robot(s) during the event.

7.3.1.2 "Higher Divisions" and/or more advanced groups of students may provide advice, but should not do the work for "Lower Divisions". For example, a secondary group helped to fix its peer primary group's work, software or hardware prior to and/or during the event. This risks disqualification of the primary group and may also risk disqualification for the secondary group (see Section 4), as the secondary group is deemed to be Mentor(s).

7.3.2 RoboCup Junior Australia reserves the right to revoke an award if fraudulent behaviour can be proven after the event.

7.3.3 If it is clear that a mentor intentionally violates the code of conduct, and repeatedly modifies and works on the students' robot(s) during the event, the mentor will be banned from future participation in RoboCup Junior events.

7.3.4 Teams that violate the code of conduct can be disqualified from the event. It is also possible to disqualify only a single team member from further participation in the event.

7.3.5 In less severe cases of violations of the Code of Conduct, a team will be given a warning. In severe or repeated cases of violations of the Code of Conduct, a team can be disqualified immediately from the event without a warning.