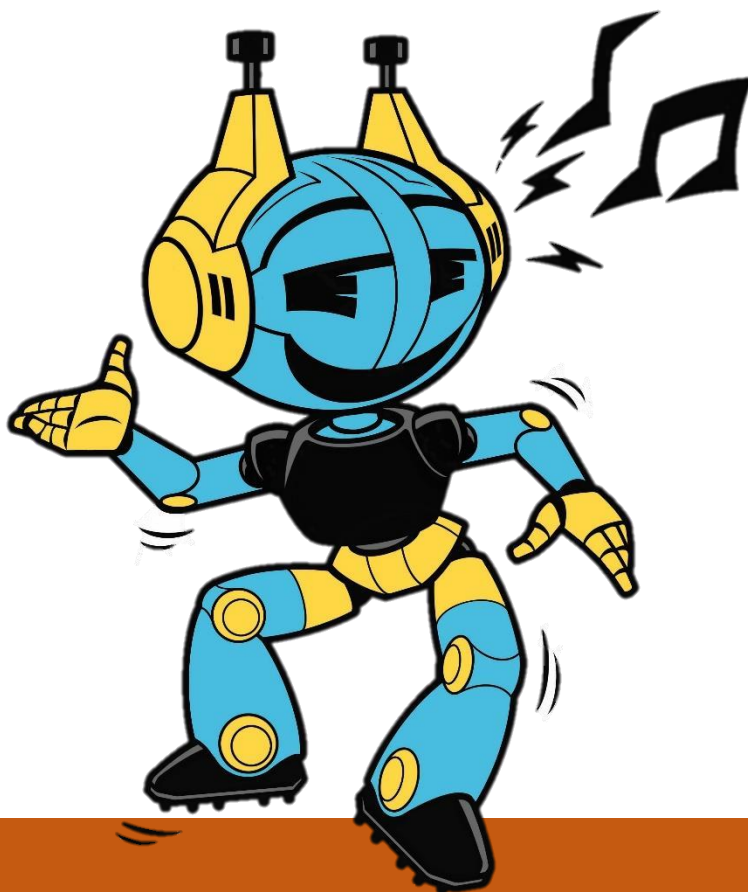




RoboCup Junior Australia

OnStage Performance Rules 2023

Last Modified: 20 February 2023





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RoboCup Junior Australia OnStage Performance Technical Committee

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Code of Conduct

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 event 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 events that any technological and curricular developments will be shared with other participants after the event. 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 RoboCup Junior Australia Australian Open for the titled year. State and Regional events may implement variations of these rules. These variations will be communicated to the participants through email and/or on the relevant State Webpage on the RoboCup Junior Australia website prior to the state or regional event.

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**.



Table of Contents

Code of Conduct.....	2
1 The Challenge	5
1.1 Challenge Description	5
1.2 Novice Division.....	5
1.3 Open Division.....	5
1.4 Students.....	5
2 The Performance Area.....	5
2.1 The Stage	5
2.2 The Pits	5
2.3 Interview Area	5
2.4 Restrictions	5
3 Equipment / Music / Props.....	6
3.1 Safety	6
3.2 Music.....	6
3.3 Props.....	6
4 Robot(s)	6
4.1 Construction and Programming.....	6
5 The Interview.....	6
5.1 Scoring	6
5.2 Requirements	6
6 The Technical Description Paper	7
6.1 Scoring	7
6.2 Requirements	7
7 The performance	7
7.1 Scoring	7
7.2 Conditions.....	7
7.3 Restarts.....	7
7.4 Unrecoverable Malfunctions	8
8 Results.....	8
8.1 Score Totals.....	8
10 Interference, Conflicts and Protests	8
10.1 Teams.....	8
10.2 Parents, Mentors and Supporters	8



10.3 Protests..... 8



1 The Challenge

1.1 Challenge Description

1.1.1 RoboCup Junior OnStage Performance challenges teams of students to design, build and program a robot or robots to perform to music. This performance can be in the form of a dance in time with the beat of the music or a theatrical presentation that complements the music. Teams are scored on their Performance, Technical Interview, and a submitted Technical Description Paper.

1.2 Novice Division

1.2.1 Any team where all members have 2 years or less experience in OnStage competitions can enter the NOVICE division. **Teams in the Novice Division may consist of two to four team members.**

1.3 Open Division

1.3.1 **Any team may enter the OPEN division. Any team that is not eligible for the Novice division must enter the Open division. Teams in the Open Division may consist of two to four team members. The Open Division is recommended to teams who are developing advanced robotic solutions and teams with less than two years' experience may wish to join to have the opportunity to explain their technical solutions.**

1.4 Students

1.4.1 RoboCup Junior Australia OnStage is open to all students enrolled and studying at a recognised Primary or Secondary education provider.

2 The Performance Area

2.1 The Stage

2.1.1 The Stage will be a 2.0m x 2.0m firm, flat, square surface with a maximum vertical differential of 3mm.

2.1.2 The boundary will be marked with 50mm black tape, leaving a useable floor of size 1.90m x 1.90m

2.1.3 The stage floor must not be modified or damaged in any way.

2.1.4 Teams entered in the Novice division may use a floor mat/covering.

2.1.4.1 Floor mats/coverings **must not** exceed 1.80m x 1.80m.

2.1.4.2 Floor mats/coverings **must not** cover any part of the stage floor tape boundary.

2.2 The Pits

2.2.1 Teams will be allocated space in a working area known as 'The Pits', away from The Stage and Public Access Area(s). Mentors will be able to supervise The Pits from the Public Access Area(s).

2.3 Interview Area

2.3.1 Teams and (optionally) Mentors will attend an interview in a quiet, reflective area away from The Stage, The Pits and the Public Access Area(s).

2.4 Restrictions

2.4.1 Mentors, Parents and Supporters are not permitted in The Pits, The Stage and the Interview Area at any time.



3 Equipment / Music / Props

3.1 Safety

- 3.1.1 Performances must not include explosions, untethered projectiles, smoke or flame, liquids, or other hazardous substances. **This includes any aerial robotic platforms such as drones.**
- 3.1.2 240v 'Mains' electricity is not allowed on or near The Stage as part of an OnStage Performance.

3.2 Music

- 3.2.1 Any team using inappropriate music that includes explicit language, implied violence or sexual lyrics/sounds will be excluded from the event.
- 3.2.2 Music is to be supplied as indicated by the organisers of the event. It should be high quality, clearly labelled with the team name, school, division, and contain only the music for the team's performance.

3.3 Props

- 3.3.1 Static or non-robotic props must not exceed a height of 50cm

4 Robot(s)

4.1 Construction and Programming

- 4.1.1 The construction and programming of the robots must be the work of participants.
- 4.1.2 The robots must be newly constructed and programmed for the current challenge season.
- 4.1.3 Parents, Mentors and Supporters must not directly assist student team members with any aspect of the construction or programming of the robots during an event.

5 The Interview

5.1 Scoring

- 5.1.1 The Interview will be scored using the Official 2023 RCJA OnStage Interview Scoresheet (for the relevant division), or equivalent electronic form. The Scoresheets are available from <https://robocupjunior.org.au/onstage>
- 5.1.2 Interview scores for OPEN division will be moderated by the teams' experience and capabilities. That is, a more experienced team will be expected to demonstrate a higher level of technical competence to achieve the same score as a team with less experience.

5.2 Requirements

- 5.2.1 All participants present at the event must attend The Interview.
- 5.2.2 All robots must be presented at The Interview in working condition.
- 5.2.3 The team is required to present a clear and complete copy of the Technical Description Paper. The Technical Description Paper is available from <https://robocupjunior.org.au/onstage>.
- 5.2.4 Mentors are permitted in the Interview for their Team(s) but must not attempt to influence the Interview.
- 5.2.5 The Interview panel will not be influenced by any Mentors attending The Interview.



6 The Technical Description Paper

6.1 Scoring

6.1.1 The Technical Description Paper will be scored using the Official 2023 OnStage Interview Scoresheet. The Technical Description Paper is available from <https://robocupjunior.org.au/onstage>.

6.2 Requirements

6.2.1 The Technical Description Paper must be submitted by the team electronically by the nominated closing date indicated in the event registration system.

7 The performance

7.1 Scoring

7.1.1 Team Performances will be scored using the Official 2023 RCJA OnStage Performance Scoresheet (for the relevant division), or equivalent electronic form. The Scoresheets are available from <https://robocupjunior.org.au/onstage>.

7.1.2 The number of rounds and the format of the competition will be announced during the team briefing at the beginning of the competition.

7.2 Conditions

7.2.1 The total time allowed for a performance is six minutes.

7.2.1.1 Once time expires, judges will stop watching the performance and determine the score.

7.2.2 Within the time limit, teams are required to setup all equipment on the Stage, complete the performance and then leave the Stage completely.

7.2.2.1 Only participants can setup or remove equipment from the Stage.

7.2.3 The performance must be between one minute and two minutes. Any supporting music/sound effects will be muted once two minutes has elapsed.

7.2.4 The performance must occur only on The Stage. A robot is considered off The Stage if all parts of the robot are no longer inside the outermost edge of the tape boundary on The Stage.

7.2.5 All props must fit clearly within the black boundary of the stage. There are to be no props outside the boundary.

7.2.6 Before the routine begins, the student team leader must inform the judges of any human-robot interactions planned within the routine.

7.2.7 The performance is to be performed autonomously. Where code is run from a device other than the robot itself, that device must be placed within the stage and not touched after the performance has started.

7.2.8 Any performance that includes music, themes and costumes that features violent, military, sexual, threatening, or criminal elements will be excluded. **Mentors are reminded to check their team(s) music choices before competition to prevent causing offence to others.**

7.2.9 Teams are permitted to change programs, performance routines or robots between round(s)

7.3 Restarts

7.3.1 A team can request a restart of the performance within the first 30 seconds of the performance.

7.3.1.1 A restart is signalled clearly to the judges verbally by the Team Leader (who must be a student).

7.3.1.2 A performance can have a maximum of two restarts.

7.3.1.3 Where the circumstances of a restart are not caused by the team, this will not count towards their restart count, nor will it incur any points deduction. Time will be added to the performance to reflect the time consumed by this restart.



7.4 Unrecoverable Malfunctions

- 7.4.1 Where a team indicates that they cannot recover due to hardware and software malfunction, The performance Clock can be stopped at the discretion of the judges. The performance Clock would then continue once the performance starts again. All points and deductions would carry over and the performance total time is maintained.

8 Results

8.1 Score Totals

- 8.1.1 The Interview Score will come from Official 2023 RCJA OnStage Interview Scoresheet (for the relevant division), or equivalent electronic form plus the Technical Description Paper, both available from <https://robocupjunior.org.au/onstage>.
- 8.1.2 The performance Score will come from Official 2023 RCJA OnStage Performance Scoresheet (for the relevant division), or equivalent electronic form, available from <https://robocupjunior.org.au/onstage>.
- 8.1.2.1 Where teams are given more than one performance opportunity, only the highest performance score will be used to determine the performance score component.
- 8.1.2 A teams' final score will be the best Performance score and the total score form the Interview and Technical Description Paper.

10 Interference, Conflicts and Protests

10.1 Teams

- 10.1.1 Mentors, Parents and Supporters found to be assisting teams on the day, both within, or outside The Event Venue, will see teams incur an official warning. Further infringements may see the team disqualified and/or excluded from The Event.

10.2 Parents, Mentors and Supporters

- 10.2.1 Parents, Mentors and Supporters are only permitted in Public Access Area(s). Additionally, Mentors are permitted in The Interview Area. Parents, Mentors and Supports are not permitted in the performance Area or The Pits. Any continued infringement will incur an official warning for the relevant team(s) and further infringements may see the team(s) disqualified and/or excluded from The Event.

10.3 Protests

- 10.3.1 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.
- 10.3.2 The protest must be made in writing not more than 30 minutes after the performance or The Interview.
- 10.3.3 Protests must be lodged with the OnStage Performance Coordinator or other relevant person at The Event and will be referred to the judges for consideration.
- 10.3.4 Any protest must include:
- 10.1.4.1 All relevant facts
 - 10.1.4.2 Any corroborative evidence
 - 10.1.4.3 The rules that are believed to have been breached.