

V1.0

Using a BL-HS motor driver module and Field-Oriented Control (FOC), the RoboMaster G20 Brushless DC Motor Speed Controller enables precise control over motor speed.



Exclusively designed for the RoboMaster series, the BL-HS Brushless DC Motor and G20 Brushless DC Motor Speed Controller, the BL-HS Assembly Kit includes several cables and a terminal board.

RoboMaster Reference System Specification Manual, RoboMaster Reference System User Manual, Introduction of Reference System Module

The M2009 Assembly Kit includes several cables and a terminal board, providing a complete solution for motor control by your RoboMaster system.

The 23rd China University Robot Competition

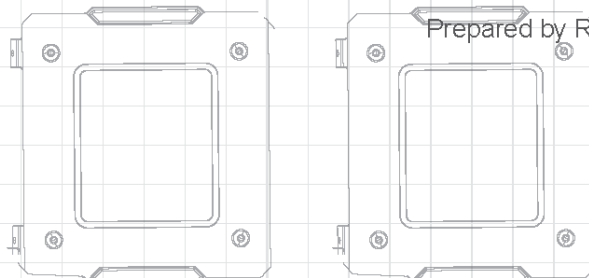
**ROBOMASTER 2024**

University League

# Participant Manual

Prepared by RoboMaster Organizing Committee

Released in October 2023



## Statement

Participants are forbidden from engaging or participating in any actions determined by the RoboMaster Organizing Committee (hereinafter referred to as “the RMOC”) as involving public disputes or sensitive issues or causing offence to the public or certain social groups, or damaging the image of RoboMaster; otherwise, RMOC shall have the right to disqualify offending persons permanently from the competition.

## Release Notes

Date	Version	Release Notes
2023.10.31	V1.0	First Release

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# 1. Introduction

Affiliated with the China University Robot Competition, the RoboMaster University Series (RMU) is initiated by DJI, serving as an academic exchange platform specially designed for technology enthusiasts from all over the world. Since its establishment in 2013, the RoboMaster has been committed to its mission - “empowering young learners to transform their world with the power of engineering and technology”. The RoboMaster is also dedicated to tapping the potential of young talents with engineering backgrounds while widely passing on the beauty of science & technology as well as innovation to the public.

The RoboMaster University League (RMUL), organized by local academic institutions and universities, engaging in nearby universities, is dedicated to promote technology exchanges among regional universities, cultivate a strong academic atmosphere, and assist the development of regional technology innovation.

The RMUL comprises two battle formats: 3V3 Match and Standard Match. Participating teams in the 3V3 Match may also advance to the RMUC through the [Scoring and Ranking System](#).

## 2. Participation

### 2.1 Participating Teams

The participating teams for RMUL 2024 are divided into two categories: teams from mainland China and teams from Hong Kong, Macau, Taiwan and overseas.

The below shows the definition, participation rights and entry procedures for each type of team.

Table 2-1 Team Definitions, Participation Rights and Entry Procedures

<b>Teams from Mainland China</b>	
<b>Definition</b>	Participating teams from universities or colleges in Mainland China (including sino-foreign cooperative universities or colleges) that pass the registration review within the specified period and meet the relevant entry requirements.
<b>Participation Rights</b>	Qualified for the current season competitions, awards application and promotion.
<b>Participating Procedures</b>	<ol style="list-style-type: none"> <li>Teams are to follow the procedures applicable to mainland teams.</li> <li>Teams can sign up at competition sites in Mainland China. If registration for a selected site is full, the RMOC will make adjustments based on the information such as the applying university's location.</li> </ol>
<b>Teams from Hong Kong, Macau, Taiwan and overseas</b>	
<b>Definition</b>	University or college participating teams from Hong Kong, Macau, Taiwan and overseas that pass the registration review within the specified period and meet the relevant entry requirements.
<b>Participation Rights</b>	Qualified for the current season competitions, awards application and promotion. Note: Due to their different education systems, senior high school students from Hong Kong, Macau, Taiwan and overseas are allowed to participate, but their number must not exceed 20% of the total number of team members.
<b>Participating Procedures</b>	<ol style="list-style-type: none"> <li>By default, teams from Hong Kong, Macau, and Taiwan are to register at competition sites in Mainland China and follow the procedures applicable to teams from Mainland China. If registration for a selected site is full, the RMOC will make adjustments based on the information such as the applying university's location.</li> <li>By default, overseas teams are to register at overseas competition sites and follow the procedures applicable to overseas teams.</li> </ol>



Teams from Mainland China participating at mainland competition sites according to the entry procedures for Teams from Mainland China are divided into Tier-1 Teams and Tier-2 Teams. For further details, please refer to [Scoring and Ranking System](#).

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Teams must adhere to the following rules:

- R1 All participating teams are required to form their teams at the [RoboMaster Registration Center](#), fill in their team details, and invite team members to join. Before the registration is confirmed by the Captain, the details may be amended. Once it is confirmed, the details will be locked in and submitted to the RMOC for review. The registration will be approved if the details meet the rules in this chapter. The RMOC will open the Registration Center from time to time in the competition season, during which teams can modify their team and member details, their roles and granted permission, etc. The Registration Center will be open for one last time before the competition starts. The RMOC will follow the final information submitted in preparing and giving out award certificates.
- R2 Any team participating in different competitions must use the same team name. A team's name must be in the format of "XXX Team", where "XXX" shall be the team's self-chosen name. The total length of the team name should not exceed 16 English letters or 8 Chinese characters. The team name must not include the school name or its abbreviation in Chinese/English, or such Chinese characters as "队", "团队", and "战队" which mean "team" in English, or other special symbols such as "\*/-+". The team name must reflect the positive and pioneering spirit of the team and comply with relevant laws and regulations in China. The team name must reflect the positive and pioneering spirit of the team and comply with relevant state laws and regulations. If the RMOC determines that a team's name does not align with the spirit of the competition, it has the right to require the team to change its name.
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After submitting their registration materials, participating teams are not allowed to change their team names.

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- R3 A participating team must be attached to a university or college, and must meet the requirements for the roles, number and identity of participants stated in "2.2 - Participants". If any participant's identity does not meet the requirements, the referee will issue a Verbal Warning to the participating team. If the Verbal Warning is ineffective, the highest penalty that can be given to the offending team is disqualification, depending on the seriousness of the situation.
- R4 In principle, each college or university is only allowed to have one qualified team for one competition (challenge). Institutions having multiple campuses in different cities, making it difficult for certain students to

compete as a team, are allowed to form more than one campus-based teams provided it has been verified by the RMOC. If a school has more than one team applying for the competition, refer to [the Announcement on the List of Representative Teams for RoboMaster University Series 2024](#). The applicant must ensure that its registration information is complete and accurate, and that it will undertake the corresponding responsibilities. The applicant must bear all consequences caused by any missing or inaccurate information. For special circumstances, the applicant may contact the RMOC, which will handle the case based on actual circumstances. The RMOC reserves the right of final interpretation.

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The RMOC will reject the registration of any team that does not meet any of R1-R4. The participating team can reapply until it meets the requirements.

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R5 Intercollegiate team is not allowed in principle.

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The team having registered for the RMUC as an intercollegiate team is allowed to enroll in the RMUL as the same intercollegiate team.

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R6 In this season, one participant can only join one team for the competition. If a team member fails to observe the above requirement, the referee will issue a Verbal Warning and require the member to withdraw from one of the teams. If the Verbal Warning is ineffective, the highest penalty that can be imposed on the offending member and team is disqualification from the competition.

R7 If any two or more teams do not meet any one requirement under the “Five Differences” Rule, they shall be treated as the same team.

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- The “Five Differences” Rule: Different team names, different team members, different supervisors, different affiliated institutions (college or other educational institutions), and different robots.



- In the RMUL, 3V3 Match and Standard Match are deemed as a whole. It is impossible for different teams from the same university to participate in 3V3 Match and Standard Match, respectively.
  - Team name serves as the primary identity for different teams from the same school.
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R8 Provided the relevant registration requirements are met, one team can sign up for more than one RoboMaster competition (including RMUC and RMUL).

R9 The RMOC will deem a team participating in different competitions in the same season as one and the same group to handle the various competition processes more efficiently (including free material supply, material purchases, and participation support). A team cannot be broken up after completing registration for the season.



## 2.2 Participants

The roles and responsibilities of participants are as follows:

Table 2-2 Participant Roles and Responsibilities

Roles	Role Instructions	Responsibilities	Status	No. of Persons
<b>Supervisor</b>	<ul style="list-style-type: none"> <li>● Person in charge of the team</li> <li>● Cannot simultaneously assume the roles of advisor and Regular Member</li> </ul>	<ul style="list-style-type: none"> <li>● Responsible for building and managing the team</li> <li>● Guide the team in building their robots</li> <li>● Responsible for the personal safety of the team and the security of its property</li> <li>● Coordinate on-campus resources, guide the team in developing project plans, controlling preparation progress, and help the team successfully conclude the match</li> <li>● Cooperate with the RMOC proactively during the competition</li> </ul>	Faculty members of the team’s college or university who are qualified to teach or conduct scientific research and will have graduated by August 2024 (Evidence may be required to be shown on site)	1-5
<b>Advisor</b>	<ul style="list-style-type: none"> <li>● Team Advisor</li> <li>● Cannot simultaneously assume the roles of Supervisor</li> </ul>	<ul style="list-style-type: none"> <li>● Provide guidance and support to the team on strategy, technology, management, etc.</li> <li>● An Advisor can undertake robot-building tasks and</li> </ul>	Full-time junior college students, undergraduates, postgraduates, and doctoral degree candidates in colleges and universities, as well as engineers, researchers	0-5

Roles	Role Instructions	Responsibilities	Status	No. of Persons
	and Regular Member	handle other competition-related matters.	and faculty members working in enterprises, research institutions, or as freelancers	
<b>Regular Members</b>	<ul style="list-style-type: none"> <li>Regular Members include the Captain, PR Manager, Project Manager, Business Manager and General Members.</li> <li>They are not allowed to assume both the roles of Advisor and Supervisor.</li> </ul>	Please refer to the table below.	Full-time junior college, undergraduate, postgraduate and doctoral students with proof of their student identity in their team’s university or college between September 2023 and August 2024 (evidence may be required to be shown on site).	<ul style="list-style-type: none"> <li>3V3 Match: 4-12</li> <li>Standard Match: 2-5</li> </ul>
<b>Reserve Member</b>	The Reserve Members of the team will be temporarily engaged in personal study and growth and may become Regular Members after being observed and promoted by	Assisting the Regular Members in the competition		0-5

Roles	Role Instructions	Responsibilities	Status	No. of Persons
	<p>the team.</p> <p>Note: Reserve Members are not qualified for the award. They will only receive electronic certificates of participation issued by the RMOC.</p>			

Table 2-3 Regular Members’ Roles and Responsibilities

Roles	Role Instructions	Responsibilities	No. of Persons
<b>Captain</b>	<ul style="list-style-type: none"> <li>● Core team member</li> <li>● Technical and tactical leader</li> <li>● Person in charge of building team culture</li> <li>● The main liaison with the RMOC</li> </ul>	<ul style="list-style-type: none"> <li>● Responsible for the division of labor and personnel management</li> <li>● Responsible for the coordination of technical proposals, tactical arrangement, and important decision-making</li> <li>● Attend Captains Meetings, represent the team in confirming match results, and participate in appeal processes during the competition</li> <li>● Responsible for building team culture and fostering positive values among team members</li> <li>● Responsible for the legacy and development of the team</li> </ul>	1
<b>Project Manager</b>	<ul style="list-style-type: none"> <li>● Core team member</li> <li>● Overall manager of the project</li> </ul>	<ul style="list-style-type: none"> <li>● In charge of managing project tasks and coordinating funds, materials, personnel and other resources</li> <li>● Establish sound rules and systems for managing the team</li> <li>● Plan and manage the team’s targets, progress, and costs</li> </ul>	0-1

Roles	Role Instructions	Responsibilities	No. of Persons
<b>PR Manager</b>	<ul style="list-style-type: none"> <li>● Person in charge of promoting the team</li> <li>● Implementer of the team's culture</li> <li>● Can be undertaken by people who assume other roles.</li> </ul>	<ul style="list-style-type: none"> <li>● Responsible for pooling promotion resources and establishing a comprehensive system                             <ul style="list-style-type: none"> <li>➢ Organize activities via university platforms and promote the team and the competition at university</li> <li>➢ Organize daily promotional activities for the team via new media channels, keep the team active, and improve the team members' alertness to the competition</li> </ul> </li> <li>● Draft and execute publicity plans, develop the team's culture and ensure the inheritance of the team's outstanding culture to attract and retain more like-minded and talented members of the team                             <ul style="list-style-type: none"> <li>➢ Write and tell stories of distinguished teams and core team members, and take publicity measures to promote the teams' culture for wider external recognition</li> <li>➢ Build a pleasant contact ecosystem and cultural atmosphere, and create a mechanism for the retention of excellent culture</li> </ul> </li> <li>● Cooperate with the RMOC proactively in publicity and manage the content generated and fans gained by the team</li> </ul>	0-1
<b>Business Manager</b>	<ul style="list-style-type: none"> <li>● Business person in charge</li> <li>● Can be undertaken by people who assume other roles.</li> </ul>	<ul style="list-style-type: none"> <li>● Responsible for pooling the team's internal and external resources</li> <li>● Communicate with multiple parties including departments in universities or colleges, enterprises established by alumni, and local industry parks, prepare and improve business plans, seek partners through various channels, provide technical support to the team, and seek sponsorships</li> </ul>	0-1

Roles	Role Instructions	Responsibilities	No. of Persons
<b>General Member</b>	Assumes none of the above roles	-	-

- Reserve Member, PR Manager, and Business Manager apply to 3V3 Match only.



- Apart from the above officially required roles, teams can set up other roles as they deem fit, such as technical team leads or robotic team leads.

## 2.3 Rule Inquiries

The RMOC can be reached via the following contact channels. The office hours are 10:30 - 12:30 and 14:00 - 19:30 on workdays. For further contact information and Q&A rules of the RMOC, please refer to [RoboMaster Organizing Committee Official Contact Details and FAQ Rules](#).

Table 2-4 Contact Channels

Channel	Contact information
Forum	bbs.robomaster.com
E-mail	robomaster@dji.com
Phone	0755-36383255
WeChat	rmsaiwu Note: When sending a friend request, please indicate “institution name + designation + name”

### 3. Season Schedule



The following season schedule is for reference only. The specific time is subject to the latest announcement by the RMOC.

The RMUL 2024 consists of two schedules: the Online Schedule and the On-Site Schedule. The RMOC recommends that each team formulate a preparation plan and a robot production budget and plan before the competition to estimate the manpower and funds needed and avoid wasting such resources.

A team has to complete the Registration and pass the Technical Assessment within the deadline in order to qualify for the competition. Teams passing specific sections of the Technical Assessment will earn a corresponding product educational discount (hereinafter referred to as “product discounts”) provided by the RMOC.

- For more details on the Technical Assessment specifications, please refer to “Appendix 1 - Technical Assessment”.
- For the product discounts applicable to each Technical Assessment section, please refer to the [“RoboMaster 2024 Instructions for Purchasing Materials”](#).

The obligatory sessions for the different teams are as follows:

Table 3-1 Description of Each Section

Team Categories	Descriptions
Tier-1 Teams	Tier-1 Teams are not required to complete the Technical Assessment. They may qualify for the RMUL 2024 by simply registering on the official website and participating in the competition feedback.
Tier-2 Teams and Teams from Hong Kong, Macau, Taiwan and Overseas	Tier-2 Teams and Teams from Hong Kong, Macau, Taiwan and Overseas can only qualify for the next section of the Technical Assessment, and eventually RMUL 2024, by completing the relevant sections of the Technical Assessment.

Table 3-2 Online Schedule

Schedule	Section	Applicable Teams	Descriptions
October 18, 2023, 18:00 - November 22, 2023, 18:00	Registration on Official Website	Teams from Mainland China, and Hong Kong, Macau, and Taiwan	Log in the <a href="#">RoboMaster website</a> and complete the registration as required.
October 25, 2023, 18:00 - January 3, 2024, 18:00		Overseas Teams	

Schedule	Section	Applicable Teams	Descriptions
<p><b>January 12, 2024, 18:00 - January 13, 2024, 18:00</b></p>	<p>Technical Assessment - Referee System</p>	<p>Tier-2 Teams, and Teams from Hong Kong, Macau, and Taiwan</p>	<p>Granted with the permission to participate in the Final Robot Assessment</p>
<p><b>March 4, 2024, 18:00 - March 6, 2024, 18:00</b></p>	<p>Exam</p>	<p>Overseas Teams</p>	
<p><b>February 2, 2024, 18:00 - February 4, 2024, 18:00</b></p>	<p>Technical Assessment - Final Robot Assessment</p>	<p>Tier-2 Teams, and Teams from Hong Kong, Macau, and Taiwan</p>	<ul style="list-style-type: none"> <li>● Obtains permission to borrow the full Referee System</li> <li>● Obtains permission to submit competition feedback</li> </ul> <p>Note: The RMOC will gather information on the teams' use of their Referee System, and provide suggestions for improvement to teams that are not using the System optimally.</p>
<p><b>April 15, 2024, 18:00 - April 17, 2024, 18:00</b></p>		<p>Overseas Teams</p>	
<p><b>February 23, 2024, 18:00 - February 25, 2024, 18:00</b></p>	<p>Competition Feedback</p>	<p>Teams from Mainland China, and Hong Kong, Macau, and Taiwan</p>	<p>Teams may choose their competition sites or follow the arrangements by the RMOC. The RMOC will decide which teams have priority in their choice of competition sites and are qualified for the offline competition, based on the region in which their college or university is located and their rankings.</p>
<p><b>May 6, 2024, 18:00 - May 8, 2024, 18:00</b></p>		<p>Overseas Teams</p>	

Table 3-3 On-Site Schedule

Schedule	Item	Applicable Teams	Eligibility
<b>March - April 2024</b>	Competition sites in Mainland China	Teams from Mainland China, and Hong Kong, Macau, and Taiwan	<ul style="list-style-type: none"> <li>● Tier-1 Teams can qualify for the competition by registering and participating in the competition feedback.</li> <li>● Tier-2 Teams and teams from Hong Kong, Macau, and Taiwan qualify for the competition once they have passed all sections of the Technical Assessment.</li> </ul>
<b>June - July 2024</b>	Overseas competition sites	Overseas Teams	Qualified for the Competition once they have passed all sections of the Technical Assessment prior to the competition.



An estimated 9 competition sites will be set up for the RMUL 2024 in Mainland China, and 1 site in North America. Please check the latest announcements by the RMOC for the actual number of sites and other relevant information.



## 4. Awards

This section sets out the awards structure for the RMUL 2024.



- Awards are subject to further adjustments, and the latest Participant Manual for each competition area shall prevail. The names of the awards are subject to further adjustments and the actual certificates issued shall prevail.
- The number of awards for each level of each challenge is subject to the actual number of participating teams eligible for awards. For the actual number, please pay attention to the latest version of Participant Manual released by the RMOC.
- During this competition season, any team successfully registered at multiple sites can earn awards and scores only at the site of the province where its university is located. If no competition site exists in the province, the team can earn awards and scores only at the first site where it was first successfully registered (by chronological order). The team's results at other subsequent sites will only serve as reference for the ranking of other teams and will not be considered for awards and scores.
- If a participating team withdraws from or fails to compete in the competition (i.e., failing to check in or pass the pre-match inspection for any round) two weeks before the start of the competition, the team shall be deemed as having relinquished its eligibility for awards for the particular site, and such eligibility cannot be carried forward to the next site.
- The judging criteria for the Robot Combat Awards, Outstanding Contribution Awards, and Organization Awards can be found in "[Appendix 2 Award Criteria](#)".

### 4.1 3V3 Match

In a 3V3 Match, all qualifying teams will participate in the 3V3 Match, where Tier-1 Teams and Tier-2 Teams will be judged in their respective categories based on their competition rankings. The rankings (Champion, First Runner-up, Second Runner-up, Third Runner-up, quarterfinalists, etc.) will be determined based on the actual competition outcome, and unrelated to whether a team is eligible for the prize at a particular competition site and the category it is in.



If the ranking cannot be decided in their respective groups, the teams shall be ranked based on their average round Net Base HP.

Table 4-1 Awards for 3V3 Match

Prize	Quantity	Awards
First Prize	15%/Team	First prize certificate
Second Prize	25%/Team	Second prize certificate
Third Prize	Several winners	Third prize certificate

### 4.2 Standard Match

In a Standard Match, all qualifying teams will participate in the 3V3 Match, where Tier-1 Teams and Tier-2 Teams

will be judged in their respective categories based on their competition rankings. The rankings (Champion, First Runner-up, Second Runner-up, Third Runner-up, quarterfinalists, etc.) will be determined based on the actual competition outcome, and unrelated to whether a team is eligible for the prize at a particular competition site and the category it is in.



If the ranking cannot be decided in their respective groups, the teams shall be ranked based on their average round Net Remaining HP.

Table 4-2 Awards for the Standard Match

Prize	Quantity	Awards
First Prize	15%/Team	First prize certificate
Second Prize	25%/Team	Second prize certificate
Third Prize	Several winners	Third prize certificate

### 4.3 Robot Combat Awards

The Robot Combat Awards for 3V3 Match are as follows:

Table 4-3 Robot Combat Awards for 3V3 Match

Awards	Descriptions
Robot Type	Standard, Hero, Sentry
Quantity	<ul style="list-style-type: none"> <li>● First prize: 15%</li> <li>● Second prize: 25%</li> <li>● Third prize: Several winners</li> </ul> <p>Note: The number of different awards given shall be adjusted based on the actual number of teams eligible for the awards and the performance of each robot in the competition.</p>
Awards	Award certificate (team, electronic version)

The Robot Combat Awards for Standard Match are as follows:

Table 4-4 Robot Combat Awards for Standard Match

Awards	Descriptions
Robot Type	Standard Robots
Quantity	<ul style="list-style-type: none"> <li>● First prize: 15%</li> <li>● Second prize: 25%</li> </ul>

Awards	Descriptions
	<ul style="list-style-type: none"> <li>● Third prize: Several winners</li> </ul> <p>Note: The number of different awards given for each robot type shall be adjusted based on the actual number of teams eligible for the awards and the performance of each robot in the competition.</p>
Awards	Award certificate (team, electronic version)

## 4.4 Outstanding Contribution Awards

Outstanding Supervisor award recipients, Outstanding Captain (Team) award recipients, and Outstanding Project Manager award recipients are required to submit a personal work summary and experience description within one month after the selection result is announced and are obligated to participate in the sharing sessions and surveys conducted by the RMOC. Outstanding Business Group award recipients are required to submit a personal work summary and experience description within one month after the selection result is announced.

The Outstanding Contribution Awards are as follows:

Table 4-5 Outstanding Contribution Awards

Prize	Quantity	Awards
<b>Outstanding Supervisor</b>	No more than 10 people in total for this season	<ul style="list-style-type: none"> <li>● Award certificate (for individuals)</li> <li>● Cash prize of RMB 8,000 (pre-tax)</li> </ul>
<b>Outstanding Captain (Team)</b>	No more than 8 groups in total for this season	<ul style="list-style-type: none"> <li>● Award certificate (for individuals)</li> <li>● Cash prize of RMB 5,000 (pre-tax)</li> </ul>
<b>Outstanding Project Manager</b>	No more than 8 people in total for this season	<ul style="list-style-type: none"> <li>● Award certificate (for individuals)</li> <li>● Cash prize of RMB 5,000 (pre-tax)</li> </ul>
<b>Outstanding PR Team</b>	No more than 8 groups in total for this season	<ul style="list-style-type: none"> <li>● Award certificate (for teams)</li> <li>● Cash prize of RMB 3,000 (pre-tax)</li> </ul>
<b>Outstanding Business Team</b>	No more than 8 groups in total for this season	<ul style="list-style-type: none"> <li>● Award certificate (for teams)</li> <li>● Cash prize of RMB 3,000 (pre-tax)</li> </ul>
<b>Outstanding Advisor</b>	No more than 8 people in total for this season	<ul style="list-style-type: none"> <li>● Award certificate (for individuals)</li> <li>● Cash prize of RMB 3,000 (pre-tax)</li> </ul>

## 4.5 Organization Awards

The Organization Awards are as follows:

Table 4-6 Organization Awards

Prize	Quantity	Awards
<p><b>Rising Star Award</b></p>	<p>Several winners</p>	<ul style="list-style-type: none"> <li>● Award certificate (for teams)</li> <li>● Special discount for RoboMaster Robot Self-Assembled Version Type A</li> </ul>
<p><b>Competitive Spirit Award</b></p>	<p>No more than 5 teams in the season</p>	<ul style="list-style-type: none"> <li>● Award certificate (for teams)</li> <li>● Cash prize of RMB 5,000 (pre-tax)</li> </ul>

# Appendix 1 Technical Assessment

The purpose of the Technical Assessment is for the teams to demonstrate their technical skills and guide them in their plans and preparations as well as development based on previous experience. It also offers an opportunity for team members to polish their skills, including requirements analysis, budgeting, data analysis and report drafting. All teams must complete a Technical Assessment in accordance with the requirements of the RMOC and within the time specified.

The Technical Assessment of RMUL 2024 mainly consists of two parts: Referee System Exam and Final Robot Assessment. The latest tasks and requirements relating to each section of the Technical Assessment shall be based on [announcements on the official website](#). For the schedules of each section, please refer to “3 Season Schedule“.

In the RMUL 2024, Tier-2 Teams and Teams from Hong Kong, Macau, Taiwan and Overseas are required to complete relevant technical assessment materials within the specified time according to the RMOC’s requirements.

## A. Referee System Exam

Exam Scope: “[RoboMaster Referee System User Manual](#)” and other documents related to the Referee System.

## B. Final Robot Assessment

Chance for submission: Once

Passing criteria: All teams will be ranked according to their final score. A certain proportion of the top-ranked teams will pass this section.

Content to be submitted and requirements:

Final Robot Presentation: PowerPoint file and video. To show the progress of each robot category with proof and evidence including video clips. Please refer to “[RoboMaster 2024 University Series Progress Assessment Criteria](#)”.

Video requirements:

- The video must display the full lineup and provide a group photo of all robots. For example, if there are 2 Standard Robots, both robots must be displayed.
- College name and date and location of recording must be shown at the beginning of the video.
- A key vision backdrop of the current season is required in the video clips. Please stay tuned for a subsequent announcement about specific requirements.
- The video’s resolution must be higher than 720p. Every process must include captions or information boards, which must provide clear and accurate explanations for each process shown in the video.
- Ensure only relevant content is shown and the video is tightly edited lasting no longer than three minutes.

## Appendix 2 Award Criteria

### A. Robot Combat Awards

Each robot type is ranked in accordance with the data selected from their performance in the competition. Robots that are qualified and meet the minimum eligibility requirements for the award must fulfill the inspection criteria. The number of winners selected will depend on a specific ratio against the total number of candidates.

Appendix Table 1 Robot Data Selection for the 3V3 Match

Robot Type	Selected Data Type
Standard Robots	Average level of damage and hit ratio in each round
Hero Robots	
Sentry Robots	



In case of multiple Standard Robots in the lineup, the one with the best performance is deemed as the nominee for the awards.

Appendix Table 2 Robot Data Selection for the Standard Match

Robot Type	Selected Data Type
Standard Robots	Average level of damage/damage borne in each round (only taking into consideration the rounds in which the amount of damage suffered by the Standard Robot exceeds 25) and hit rate

### B. Outstanding Contribution Awards

The selection criteria for the Outstanding Contribution Awards are as follows:

Appendix Table 3 Outstanding Contribution Awards Selection Criteria

Prize	Selection Criteria	Selection Method
Outstanding Supervisor	<ul style="list-style-type: none"> <li>The team displays a good competitive spirit, with no serious violations of competition rules and proper standards of conduct.</li> </ul>	<ul style="list-style-type: none"> <li>To apply, teams are required to complete a questionnaire (to be updated).</li> </ul>

	<ul style="list-style-type: none"> <li>● Guides the student team and instills team culture, displays a high sense of responsibility, is caring towards each team member, cares about the growth and development of students in the field of competition, and is deeply revered by said students</li> <li>● The awards aim to open up employment opportunities for outstanding team members. The CVs of the nominated talent need to be submitted.</li> </ul>	<ul style="list-style-type: none"> <li>● After the application is submitted, the RMOC will select the winners based on their submitted questionnaires.</li> </ul>
<p><b>Outstanding Captain (Team)</b></p>	<ul style="list-style-type: none"> <li>● The team displays a good competitive spirit, with no serious violations of competition rules and proper standards of conduct.</li> <li>● The captain leads the team and assumes the main responsibility for the team’s work. The captain reasonably sets the direction and goals for the team’s development, plans key technology paths, leads team members to overcome technical difficulties, and makes decisions on major issues.</li> <li>● The captain plans effective resources within the team and properly allocates tasks to ensure efficient completion of tasks.</li> </ul>	<ul style="list-style-type: none"> <li>● To apply, teams are required to complete a questionnaire (to be updated).</li> <li>● After the application is submitted, the RMOC will select the winners based on their submitted questionnaires.</li> </ul>

	<ul style="list-style-type: none"> <li>● The captain shows a strong sense of belonging toward the competition and their team, endeavors to build a positive culture and values within the team, and focuses on the development and growth of the team members.</li> </ul>	
<p style="text-align: center;"><b>Outstanding Project Manager</b></p>	<ul style="list-style-type: none"> <li>● The team displays a good competitive spirit, with no serious violations of competition rules and proper standards of conduct.</li> <li>● The project manager does a good job of managing the team's projects, including effectively coordinating and promoting team members to work in concert, making project schedules, controlling project quality and risks, and communicating to ensure that projects advance as planned.</li> <li>● The project manager assists the captain (team) in work such as requirement management, version planning, project process formulation and optimization.</li> <li>● The project manager coordinates resources from all parties, effectively solves resource and schedule problems encountered in the project, and concludes useful experience in projects.</li> </ul>	<ul style="list-style-type: none"> <li>● To apply, teams are required to complete a questionnaire (to be updated).</li> <li>● After the application is submitted, the RMOC will select the winners based on their submitted questionnaires.</li> </ul>



<p><b>Outstanding PR Team</b></p>	<ul style="list-style-type: none"> <li>● The team displays a good competitive spirit, with no serious violations of competition rules and proper standards of conduct.</li> <li>● Submits publicity reports on time, active in planning the team's PR work to increase the team's influence.</li> <li>● Dedicated to building the team's culture.</li> </ul>	<p>Selected according to the PR team's assessment score ranking and comprehensive performance evaluation</p>
<p><b>Outstanding Business Team</b></p>	<ul style="list-style-type: none"> <li>● The team displays a good competitive spirit, with no serious violations of competition rules and proper standards of conduct.</li> <li>● Actively plans the business work within the team, integrates the internal and external resources of the team and locates investment partners through various channels in order to provide technical support and fund sponsorship for the team.</li> </ul>	<ul style="list-style-type: none"> <li>● To apply, teams are required to complete a questionnaire (to be updated).</li> <li>● After the application is submitted, the RMOC will select the winners according to the Application Form.</li> </ul>
<p><b>Outstanding Advisor</b></p>	<ul style="list-style-type: none"> <li>● The team displays a good competitive spirit, with no serious violations of competition rules and proper standards of conduct.</li> <li>● The advisor provides constructive and practical suggestions to the team in terms of technological innovation, tactical design, team management, team building, etc., and provides guidance and support to the team in terms of strategy, technology, management, etc.</li> </ul>	<ul style="list-style-type: none"> <li>● To apply, teams are required to complete a questionnaire (to be updated).</li> <li>● After the application is submitted, the RMOC will select the winners according to the Application Form.</li> </ul>

## C.Organization Awards

The selection criteria for the Organization Awards are as follows:

Appendix Table 4 Organization Awards Selection Criteria

Prize	Selection Criteria	Selection Method
<p><b>Rising Star Award</b></p>	<ul style="list-style-type: none"> <li>● The team was not qualified to participate in the RoboMaster University Championship (RMUC), RoboMaster University Technical Challenge (RMUT), or RoboMaster University League (RMUL) in the 2022 season and not qualified to participate in the RMUC and the RMUL in the 2023 season, and has registered for the RMUL in the 2024 season.</li> <li>● The team has not won the Rising Star Award in the 2022 or 2023 season.</li> </ul>	<p>Selection is made based on registration information.</p>
<p><b>Competitive Spirit Award</b></p>	<ul style="list-style-type: none"> <li>● The team displays a good competitive spirit, with no serious violations of competition rules and proper standards of conduct.</li> <li>● The team is active in forums, WeChat groups, etc., and interacts well with the RMOC, volunteers, and other teams.</li> <li>● The team is helpful, active and an open source of information for others, enthusiastically sharing their experience and willing to provide resources to other teams.</li> </ul>	<ul style="list-style-type: none"> <li>● Selections to be made according to the feedback given by the staff of the RMOC, other teams, and volunteers of the competition.</li> <li>● Teams with more positive feedback from the RMOC staff, other teams, and event volunteers will be given priority.</li> </ul>

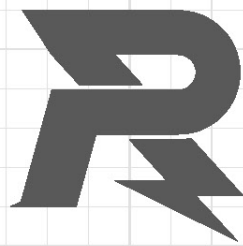
## Appendix 3 Safety Instruction

Every team member participating in the RoboMaster Competitions must fully understand and accept that safety is the prerequisite for the sustainable development of the RoboMaster Competition. In order to protect the rights and interests of all team members and the event organizers, and according to relevant laws and regulations, all team members who have registered for the RoboMaster Competitions will be deemed to have acknowledged and agreed to abide by the following safety terms:

1. All team members who have registered to participate in the RoboMaster competition must confirm that they have full capacity for civil conduct and they are able to build and operate robots independently. They must also make sure that they have read in detail the Registration Guide and Competition Regulations among other important documents stating the rules and regulations of the competition, before starting to use any products by SZ DJI Technology Co., Ltd. to build robots.
2. During the competition, all team members should make sure that their actions including the creation, testing, and use of robots, will not cause any injury or damage to his or her teammates, members of the opposing teams, referees, competition staff, audience, equipment, or the Competition Area.
3. All teams must ensure that the structural design of their robots will not hinder safety inspection during the Pre-match Inspection and agree to fully cooperate with the Pre-match Inspection carried out by RoboMaster's organizers.
4. The team must guarantee that no fuel-driven engines, explosives, high-pressure gases, or energetic chemicals are used.
5. Throughout the R&D stage, preparation stage as well as the competition stage, all team members must pay full attention to potential safety issues, and the team's supervisors must be responsible for instructing and supervising the team on safety issues.
6. The team must guarantee the safety of all the robots. This includes ensuring the "projectile" launchers installed on the robots are safe and that the projectile launchers will not cause any harm (either directly or indirectly) to any operator, referee, staff, or audience member.
7. The team should take sufficient and necessary safety measures during the R&D, training and competition stages regarding potential accidents. The measures may include preventing control systems from losing control, urging the team members to envision the steps before the operation to avoid mistakes or collisions between team members and between team members and robots, forbidding isolated training to ensure there will always be team members to respond to emergencies; wearing goggles and helmets; conducting appropriate locking and adding an emergency stop switch in the robot system during commissioning.
8. Teams will be held responsible for all accidents and losses resulting from the technical faults of robots, loss of

control of UAVs or any other unexpected circumstances.

9. The aerial robots of participating teams are allowed to fly only above certain restricted areas in competition venues. Therefore, no flight permit is not required. To ensure the flight safety of an aerial robot, use an aerial safety rope to connect the aerial robot to a fixing pile on the ground. If an accident occurs, for example, if the aerial robot breaks away from the safety rope, the pilot must stop the motors and land the aerial robot as soon as possible. It is strictly prohibited to continue to fly in case of an accident. Participating teams are strictly prohibited from flying aerial robots outdoors.
10. The materials bought from or provided by the organizer SZ DJI Technology Co., Ltd., such as batteries and the Referee System, must be used in accordance with their instructions. SZ DJI Technology Co., Ltd. will not be held responsible for any injuries that arise from improper use of these materials. Teams will be held responsible for any injuries caused to their own members or any third party and for any property loss arising from creating and operating any robots.
11. All team members must remain in strict compliance with the laws and regulations of the country or region. All team members must also pledge that their robots will only be used for the RoboMaster competitions and that their robots will not be illegally modified or used for any illicit purpose(s).



**E-mail:** [robomaster@dji.com](mailto:robomaster@dji.com)

**Forum:** [bbs.robomaster.com](http://bbs.robomaster.com)

**Website:** [www.robomaster.com](http://www.robomaster.com)

**Tel:** +86 (0)755 36383255 (GTC+8, 10:30AM-7:30PM, Monday to Friday)

**Address:** T2, 22F, DJI Sky City, No. 55 Xiayuan Road, Nanshan District, Shenzhen, China