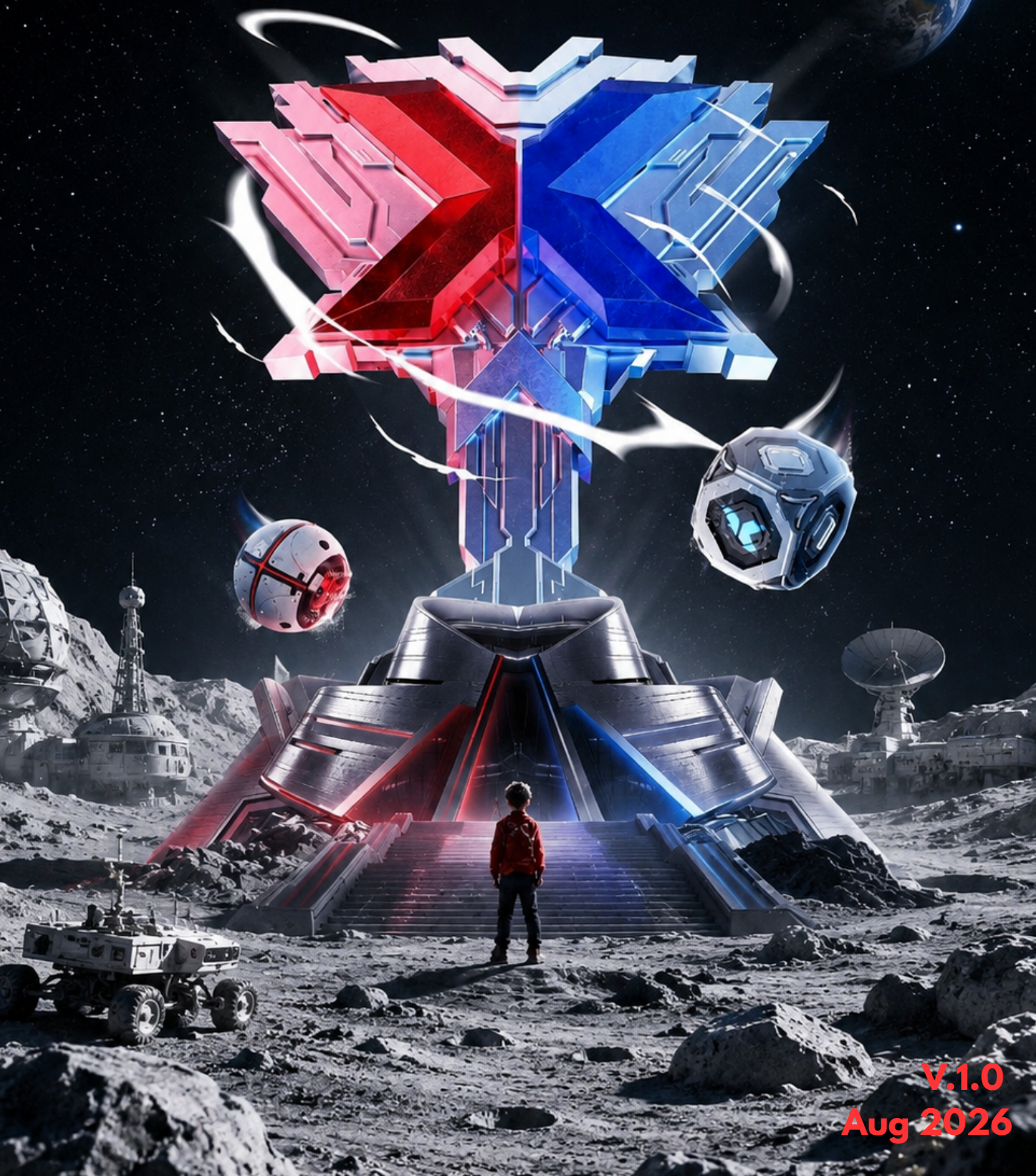


MAKE X

RULES GUIDE

MAKEX STARTER LUNARX



V.1.0
Aug 2026



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1. Introduction

1.1. About MakeX

MakeX is an international robotics competition platform for young people around the world. Originating from China, it is centered on STEAM and engages youth through various forms such as robotics competitions, STEAM carnivals, innovation showcases, and international exchange events. These activities allow participants to experience the joy of creation in practice and inspire their passion for technology.

The MakeX Robotics Competition upholds the spirit of Creativity, Teamwork, Fun, and Sharing, combining challenge and enjoyment. It encourages young people to embrace Science (S), Technology (T), Engineering (E), Arts (A), and Mathematics (M), and to apply this knowledge to real-life situations — exploring boldly and solving problems with creativity and teamwork.

1.2. MakeX Spirit

Creativity: we advocate curiousness and innovation, encouraging all contestants to create unique high-tech works with their talent, and challenge themselves for continuous progress!

Teamwork: we advocate solidarity and friendship, encouraging all contestants to develop a sense of responsibility and enterprising spirit, and sincerely work with their partners for win-win development!

Fun: we encourage contestants to build a positive, healthy mindset in the competition. Enjoy the journey and grow in the process.

Sharing: we encourage contestants to have an open mind as a maker and share their knowledge, responsibility, and joy with everyone, including their teammates and Competitors. MakeX spirit is the cultural cornerstone of the MakeX Robotics Competition. We hope to provide a platform for all contestants, mentors and industry experts to exchange



ideas, study and grow up, and help young people acquire new skills during creation, learn to respect others in teamwork, gain an enjoyable life experience in the competition, take delight in sharing with the society their knowledge and responsibility, and work hard to achieve their grand aspiration of changing the world and creating the future!

1.3. About MakeX Starter LunarX

MakeX Starter LunarX is a highly confrontational competition program for students between the age of 8- 10.

This program is very confrontational and enjoyable to watch, and the simple and easy-to-understand rules enhance the overall experience of participation and engagement. The design and construction of bigger robots and programming can better improve the contestants' design abilities and multi-dimensional thinking abilities of advanced robots. Also, the contestants are exercising logical thinking, strategic analysis, communication and cooperation, and improving decision-making abilities in the competition.

2. Competition Application

2.1. Participation Requirements

Participants: Contestants shall participate in a team. The number of contestants is 1-3 for each team, with 1-2 mentor(s).

Age: Team members must be teenagers or children between the ages of 8-10 and the mentor must be at least 18 years old.



Team Roles: Everyone in the team can play their respective roles as operator, observer. The operator is responsible for operating the robot, and the observer is responsible for assisting the operator to complete the game.

Identification Symbols: Each team must have a team logo, teamname, and team slogan. Teams are encouraged to use uniforms, flags, posters, badges, base decorations, etc., to show the team culture.

3. Competition Details

The theme of the 2026 Season MakeX Starter is "LunarX".

3.1. Introduction

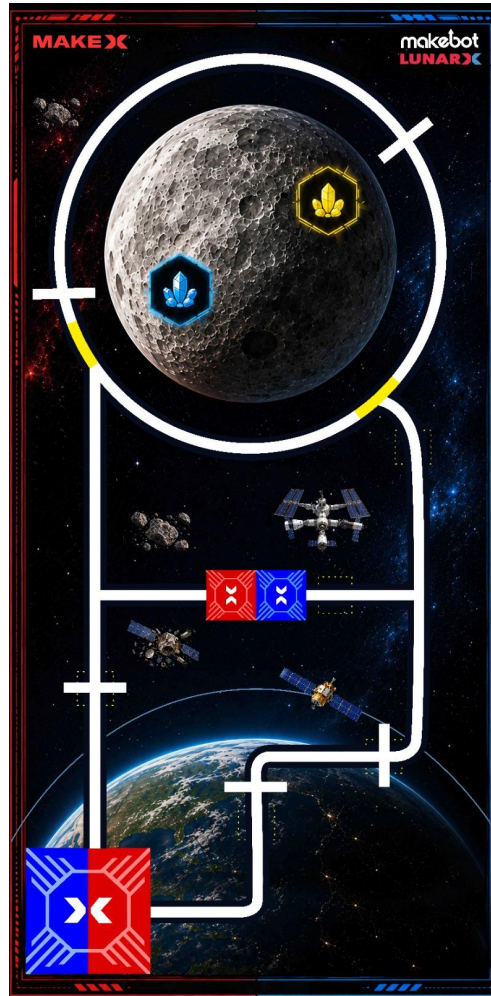
Each single match lasts for 120 seconds.

The participating teams need to complete the corresponding missions according to the requirements of the competition by automatically controlling the robot through the program robot. At the end of the match, the referee calculates the sum of both teams' scores for each mission, the highest score will win the match.

3.2. Arena

Arena:

MakeX Starter Arena consists of a map and a frame. The Size of the map is 1200mm * 2400mm



Arena Frame will be present during the National competition.

Frame will be 250mm in height.

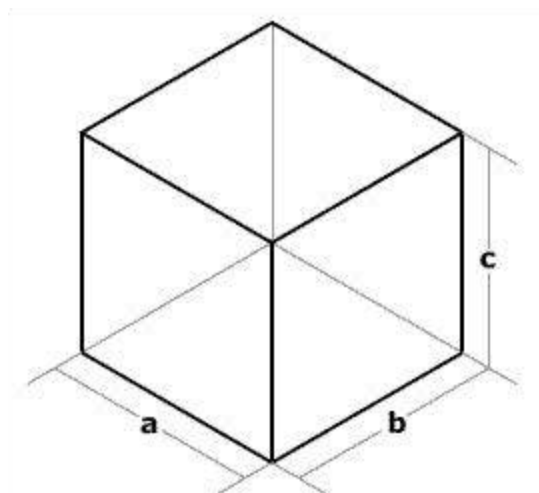
Size of the Arena is 1200mm * 2400mm

The Starting area is 300mm * 300mm



3.3. Props

Prop / Object	Used in Mission	Description
Satellite	M1	Object should not be less than 5cm in Length, Width and Height and maximum 8cm in Length, Width and height. Props can be any object and it should be brought by the own team during the competition day.
Engine	M2	
Spacecraft	M3	
LunarX Lander	M4	
Space Junk	M5	



Where $5\text{ cm} \leq a, b, c \leq 8\text{ cm}$

3.4. Missions



Missions Introduction and Scoring State Judgement

In a single match, the team's robot attempts all 5 missions listed below within the **120-second** match time.

M1 Launching the Satellite into Earth Orbit

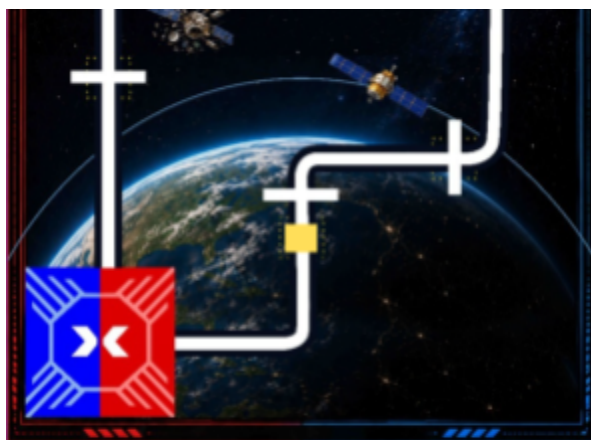
Mission Object: Satellite

Mission Background: The mission simulates placing a satellite into Earth orbit.

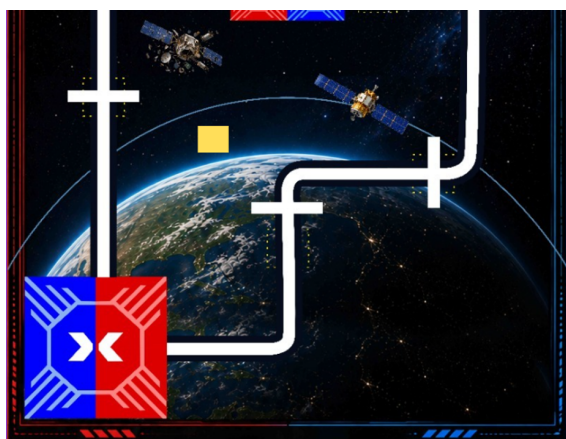
Starting Condition: The Satellite is placed at its designated starting point on the arena.

Mission Score: The Satellite comes to rest between the Earth's surface and the blue guide line.

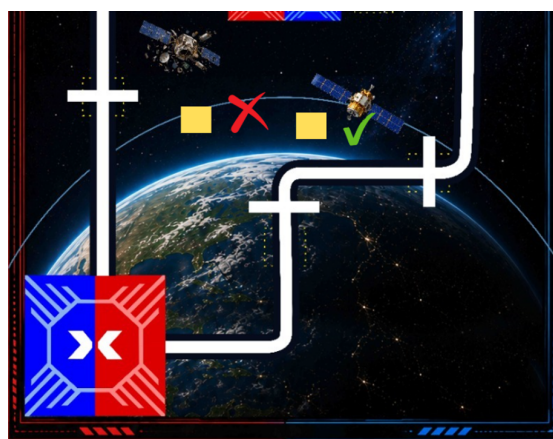
Scoring Judging: At the scoring time, the Satellite's position is fully between the Earth's surface and the blue guide line, with no direct contact from the robot.



Initial Position of the object



Final Position of the object



Correct and Incorrect positions



M2 Lower Engine Separation

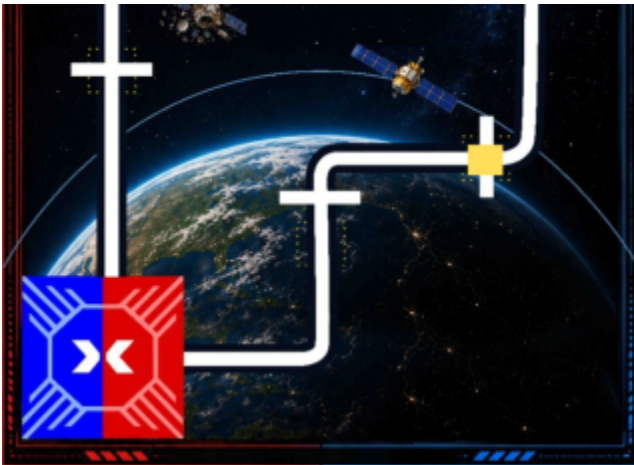
Mission Object: Engine

Mission Background: The mission simulates the rocket's lower engine separating during ascent.

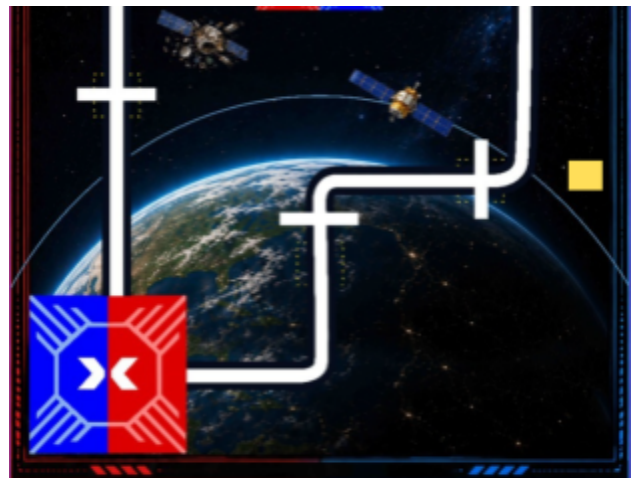
Starting Condition: The Engine begins to detach from the marked boundary on the arena.

Mission Score: The Engine is moved completely out of the marked boundary.

Scoring Judging: At the scoring time, no part of the Engine's vertical projection remains within the marked boundary, and the Engine is not in direct contact with the robot.



Initial Position of the object



Final position of the object

M3 Docking for Maintenance

Mission Object: Spacecraft

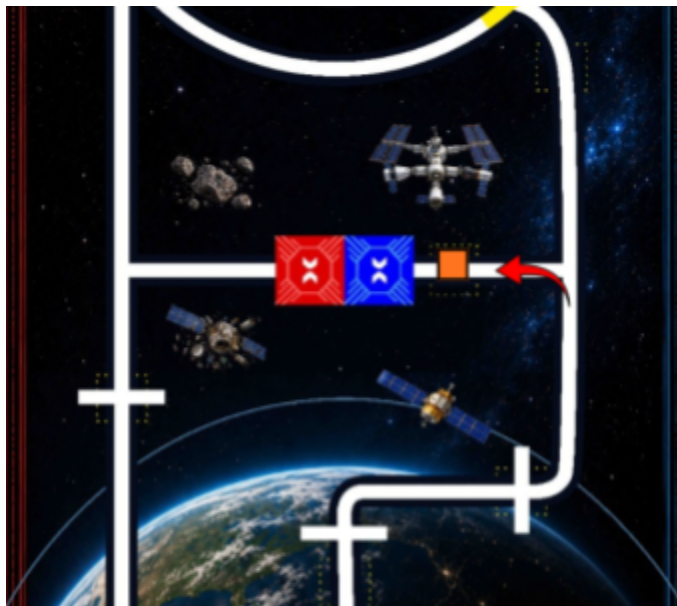
Mission Background: The mission simulates a spacecraft docking with the International Space Station for maintenance.

Starting Condition: The Spacecraft is placed at its designated starting point on the arena.

Mission Score: The Spacecraft is moved completely into the blue zone of the International Space Station.

The Size of the blue zone is 12cm * 12cm

Scoring Judging: At the scoring time, the Spacecraft's vertical projection is fully within the blue docking zone, with no direct contact from the robot.



Initial position of the object



Final position of the object

M4 Soft Landing on the Moon

Mission Object: LunarlunarX Lander

Mission Background: The mission simulates a lander achieving a soft landing on the Lunar surface.

Starting Condition: The LunarX Lander begins at its designated starting point on the arena.

Mission Score: The LunarX Lander is moved completely onto the Moon's surface.

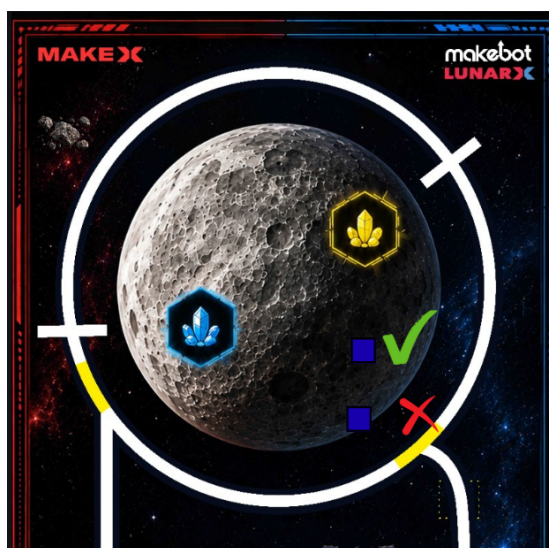
Scoring Judging: At the scoring time, the LunarX Lander's vertical projection is fully within the Moon's surface area, with no direct contact from the robot.



Final position of the object



Initial position of the object



Correct and Incorrect positions of the object



M5 Space Junk Collection Near Earth's Orbit

Mission Object: Space Junk

Mission Background: The mission simulates clearing debris from near Earth's orbit and returning it to Earth.

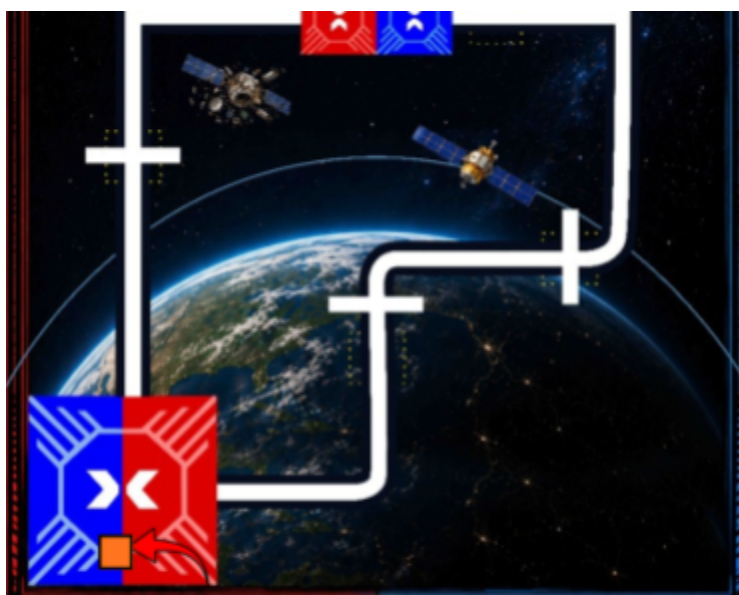
Starting Condition: The space junk is positioned within the marking near the earth's orbit

Mission Score: The Space Junk is collected and brought back to Earth.

Scoring Judging: At the scoring time, the Space Junk's vertical projection is fully within the Earth start/return zone, with no direct contact from the robot.



Initial position of the object



Final position of the object

3.5. Scoring Explanation



The final score of the match is determined by the final static state of all scoring props at the end of the match. Each **successfully completed mission awards 20 points** to the team, with a maximum possible score of **100 points** for successfully completing all missions. After the match, the referee will calculate the team's total score based on the missions completed and record the time taken to complete the match. The team with the higher score will be declared the winner. If two teams have equal scores, the team with the lower completion time will be selected as the winner.

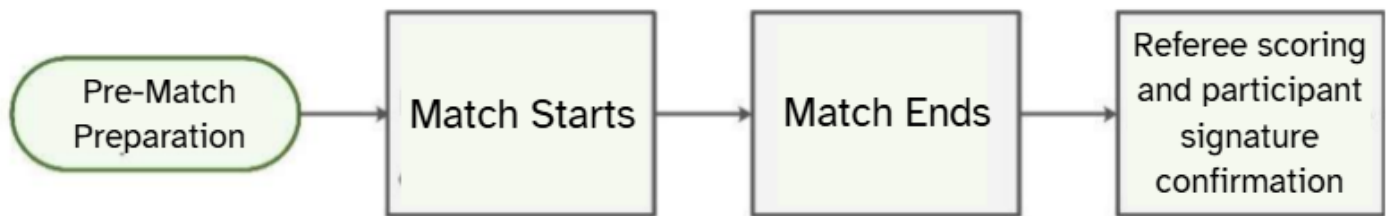
Scoring Explanation

Each mission is scored once the referee confirms, at the end of the match, that the mission object is correctly placed according to its scoring criteria above.

The referee

Mission	Mission Name	Scoring Object	Points
M1	Launching the Satellite into Earth Orbit	Satellite	20 pts*
M2	Lower Engine Separation	Engine	20 pts*
M3	Docking for Maintenance	Spacecraft	20 pts*
M4	Soft Landing on the Moon	LunarX Lander	20 pts*
M5	Space Junk Collection Near Earth's Orbit	Space Junk	20 pts*

3.6. Single Match Flow



Pre-Match Preparation

Before a single match, contestants are required to check if their robots comply with the rule requirement and if the power management module has been installed correctly and works properly in the inspection area.

After entering the field, the teams shall check whether the arena and props are placed in a standard way and whether the robot is in a standard way. After cross-checking and approval, please follow the referee's instructions and wait for the competition to start.

Start of the Match

Contestants are not allowed to contact the robot after the referee's instruction to start the competition.

Referee Scoring and Participant's Signature Confirmation

The referee will count the scores after the competition. If there is no objection to the competition, both teams must confirm the match's result. If there is any doubt about the result, the team may appeal to the referee without signing the score sheet and write down the appeal in the remark column.



4. Technical Specification

4.1. Specification for Robot Construction

The specification for robot construction provides a fair and safe competition standard for all teams and the committee encourages teams to make innovative designs of their robots on the prerequisites of meeting these specifications. The committee encourages teams to conduct hardware construction and software programming on the premise of observing the specifications. During the competition, it is a must for robots to abide by the specifications. Any robot that **violates the specifications** will be required to be modified. Those who commit serious offense will be punished for canceling the results or disqualification.

T01. The size specification of the robot is: 250mm(length)*250mm (width)*250mm (height). The length and width of robot are defined before the competition, without redefinition after the competition. When measuring the robot size, the flexible material on it should not be affected by external forces. (The flexible material includes but not limited to rolled strip, tape, foam block, etc.).

T02. Driving system: The main-board and moving robot chassis, including wheels, tracks or other mechanism structure that bring the robot into direct contact with the ground and move it over a flat field surface.

T03. Each team is only allowed to participate in competition with one robot. Teams cannot modify the driving system. If a team modifies the driving system, the team is considered to be using another robot and will be **penalize by disqualification**.

T04. If the replacement of some component is because its broken (e.g., wheel damage, motor failure, main-board failure, etc.), is not considered as the replacement of the



driving system.

T05. The parts can be lubricated with lubricant, but contestants should protect the arena from lubricant leaking.

T06. The following robot's parts that may cause danger are forbidden:

- (1) Sharp angle;
- (2) Oil pressure parts or hydraulic parts;
- (3) Switches or contacts containing mercury;
- (4) Parts that will conduct electrical current from robots to the arena;
- (5) Parts that tend to develop connections with other robots, such as hook-shaped parts and other parts;
- (6) Other dangerous parts as determined by the referees.

T07. The following hazardous materials are forbidden:

- (1) Flammable and explosive gases;
- (2) Materials containing liquids or gelatinous substances (except for glues and lubricants used in prescribed and small quantities);
- (3) Materials that may cause arena contamination, such as sand, ink, etc.;
- (4) Materials made from animal tissue;
- (5) Materials that may cause danger as determined by referees.

5. Competition Rules

5.1. Penalty



The penalty actions are categorized into three sections: "Safety Rules," "Participant Behavior Rules," and "Special Suspension."

Warning

E01. The referee issues a warning to the team regarding their violation and requires the team to immediately cease the offending behavior. If the violation significantly impacts the fairness of the competition, the referee may pause the match as necessary and restore it to its pre-match state.

Violation

E02. The referee shall impose a penalty on any team that commits a rule violation. The offending team will receive a 10-point deduction for the first offense. If the same violation is committed again, an additional 20 points will be deducted.

Suspension

E03. The referee issues a suspension to ask the robot to stop its action. The Referee is entitled to suspend robots according to the actual situation in the arena. The contestants shall ask the referee to suspend the robot while encountering robot malfunction or uncontrollably.

Disqualify for the Single Match

E04 The referee will disqualify the participating team from this match for serious violations, and the team's robot will be immediately suspended from further participation in this match, and the results of this match will be nullified, but will not



affect other matches.

Disqualify for the Entire Competition

E05. The robot will be suspended immediately and the team cannot participate in the competition and the following competition, all results will be disqualified. The team will lose the opportunity to continue to participate in the competition and the right to award.

5.2. Safety Rules

Damage or Contamination of the Field

R01. If the field becomes contaminated by a robot, the robot shall be deemed unsafe. Throughout the match, robots are strictly prohibited from using double-sided tape, glue, or any other adhesive materials to secure or fix field elements.

R02. During the match, robots must not intentionally climb or collide with the field boundaries.

Damage to Other Robots

R03. Throughout the entire event, including the match, standby, and debugging periods, it is strictly forbidden to damage or destroy another team's robot in any way. If the referee team or event committee, through on-site observation, video review, or post-match inspection, confirms that a team has engaged in damaging another robot, the act shall be deemed a confirmed violation.



The violating team will be disqualified from the entire event. In serious cases, the organizing committee reserves the right to record the incident and such behavior may affect the team's eligibility to participate in future MakeX competitions.

Using Banned Materials

R04. The following hazardous materials or dangerous structures embedded in robots are forbidden, such as:

- (1) Flammable gases, fire or smoke generating equipment, hydraulic oil or hydraulic parts, switches or contacts containing liquid mercury (mercury);
 - (2) Hazardous Substances (e.g., Lead);
 - (3) Materials that may cause arena contamination, such as sand and other objects that may be scattered during competition;
 - (4) Materials that develop connections with other robots;
 - (5) Materials with sharp edges that may cause injury.
 - (6) Materials made from animal tissue (for health and legal consideration).
 - (7) Materials containing liquids or gelatinous substances (except for glues and lubricants).
 - (8) Parts that can conduct electrical current from robots to any other parts in the Arena.
- The violating robot will be disqualified from the current match.
 - If the team wishes to continue participating, the robot must be repaired or modified to comply with the rules and pass a reinspection by the referee before rejoining the competition.
 - If the same team commits two violations, all of its match results for the event will be annulled.



Other Unsafe Factors

R05. The referee reserves the right to make an independent judgment regarding the safety of any specific robot.

The violating robot will be disqualified from the current match.

If the team wishes to continue competing, the robot must be modified or repaired to meet safety requirements and pass a reinspection by the referee before re-entering the competition.

If the same team commits two safety violations, all match results for the event will be annulled.

5.3. Participant Behavior Rules

Participant Requirements

R06. Contestants shall tie up their long hair during competition preparation, robot debugging and on-field matches. Toe-bearing shoes are forbidden.

R07. Contestants shall wear goggles during the competition.

The offending team must immediately make corrections and undergo reinspection. If the team refuses to comply after the referee's warning or if the violation is deemed severe, the team will be disqualified from the current match, but may continue to participate in other matches.

Can't Arrive the Arena on Time

R08. Teams shall arrive on time. Teams that do not show up in the competing area over 5 minutes, will be treated as giving up this match voluntarily. If the whole competition schedule is delayed, please refer to the specific notice.

The offending team will be disqualified from the current match and prohibited from participating in it, but this does not affect other matches.



Starting the Match Prematurely

R09. Robots must not be activated before the referee announces the start of the match.

If a team commits a violation, the offending team will receive a 10-point deduction.

If the same violation occurs again, the offending robot will be suspended from the match.

Any score advantage gained from the violation will be rendered invalid, and the field should be restored to its original state as much as possible before restarting that phase of the match.

Using a Banned Electronic Device

R10. During the competition, it is not allowed for contestants to use electronic communication devices (mobile phone, transceiver, computer, wireless network devices, etc.) to get in contact with the offsite people.

The offending team must immediately cease usage and make corrections.

If the team refuses to comply after the referee's warning, the offending team will be disqualified from the current match and prohibited from continuing in that round, but this does not affect other matches.

Malicious Complaints

R11. During a match, it is prohibited for contestants to make malicious complaints against the opposing team.

After entering the competition field, if a team raises a complaint and, upon verification and judgment by the referee, it is determined that the accused



team committed no violation, the complaining team will be deemed to have made a malicious complaint.

The offending robot will be suspended from the current match.

Impolite Behavior

R13. During the competition, all participants must demonstrate a positive competitive spirit, showing respect toward partners, opponents, and referees. Any impolite or inappropriate behavior—including but not limited to malicious complaints, mockery, verbal abuse, or physical altercations—is strictly prohibited.

The offending team must immediately correct the behavior.

If the team refuses to comply after the referee's warning, the team will be disqualified from the current match.

In severe cases, the team will be disqualified from the entire event, and the organizing committee reserves the right to record the incident, which may affect the team's eligibility to participate in future official MakeX competitions.

Operating Suspended Robot

R20. The operator is not allowed to control the robot after the robot is suspended.

The team will be disqualified from the current match.

6. Appeal and Arbitration

6.1. Results Confirmation



Results Confirmation

When a single match ends, the team need to confirm the results with the referees and then sign the scoring sheet. The team shall not have any objection to the results of this single match after their signatures. If there is an error regarding the points calculation for each item on the paper scoring sheet, it will be corrected and confirmed by the resulting approval staff when checking the results; other result-related issues will not be dealt with, and the signed results will be valid.

Dispute Settlement

If the team has any objections to the results and the referee's explanation, they can refuse to sign the score sheet. Instead, they need to write clearly about the situation in the remarks part of the result form. The committee will only deal with appeals related to the reasons stated in the remark column of the paper scoring sheet.

6.2. Appeal Procedure and Valid Appeal Period

Appeal Procedure

Appeals should be lodged within the “valid appeal period” by the prescribed procedure and follow the civil participation spirit. The team needs to fill in the Appeal Form and then cooperate with the Arbitration Commission to investigate the actual situation. Both sides will be required to arrive at the designated place if the Arbitration Commission requires. During the investigation, the appeal team must be present. The Arbitration Commission has the right to communicate with the team alone,



avoiding the mentor, the parents of the contestants, their relatives, or friends. The appellant should express facts clearly and objectively, not over-emotionally.

Valid Appeal Period

Normally, the appeal should be lodged within 30 minutes after the end of the competition. Please check the Program Brochure for a specific effective appeal period before the competition. The appellant and the respondent must be present at the designated place on time.

Appeal Response

Normally, the Arbitration Commission responds to the appeal after the end of the competition on the same day.

6.3. Invalid Appeal

Overdue Appeal

Appeals that are not lodged within the "valid appeal period" will be considered invalid and inadmissible. If the appellant fails to be present on time or leaves without any reason during the investigation, the appeal will be considered invalid. If the respondent fails to be present on time, the Arbitration Commission will directly determine the arbitration result and render it as a final result.

Unauthorized Personnel in Appeals

Only registered team members are eligible to submit appeals.



Appeals submitted by non-participants will not be accepted.

If unauthorized personnel (including parents, mentors, or other individuals) participate in the arbitration process without permission from the committee, the team involved will receive a formal warning. If the team fails to comply after multiple warnings, it will be disqualified from the Competition.

Unclear or Emotional Appeals

If the appealing party is unable to clearly or calmly express the appeal due to emotional reasons, making it impossible for the Arbitration Committee to understand the facts or continue the investigation, the committee will issue a warning to the team. If the team fails to comply after multiple warnings, it will be disqualified from the Competition.

Uncivil Appeal

Both parties involved in an appeal must maintain courteous and respectful conduct. Aggressive actions or inappropriate language of any kind are strictly prohibited. If a team fails to comply after multiple warnings, it will be disqualified from the Competition.

6.4. Arbitration Procedure

Arbitration Procedure

The Arbitration Commission consists of the chief referee, the arbitration consultant, and the competition technical director. The Arbitration Commission is responsible for accepting the appeals and conducting arbitration investigations, to ensure the smooth progress of the competition and the fairness and justice of the competition results.



The playback videos and photographs of any competition may be inaccurate due to the shooting angle, which is only used as reference but not arbitration evidence.

Arbitration Results

The arbitration results can be divided into “maintaining the original result of the match” or “re-match”, and the two teams shall not appeal again. If the arbitration result is a “re-match”, the two teams shall have a re-match according to the time and arena stipulated in the Appeal Form. If the team fails to reach the arena within 5 minutes after the beginning of the match, the team shall be deemed to quit the match.

Additional Remarks

The Arbitration Commission determines the final arbitration result, and neither side shall dispute the result of the appeal anymore.

7. Statement

MakeX Robotics Competition Committee reserves the final interpretation of the 2026 MakeX Starter Rules Guide.

7.1. Rules Explanation

To ensure fair competition and high-quality competition experience, the MakeX Robotics Competition Committee has the right to update and complement this Rules Guide regularly, and issue and implement the latest version before the competition. During the competition, all matters not stated in the Rules Guide shall be decided by



the referee team.

This Rules Guide is the basis for refereeing, and the referee team has the right to adjudication during the competition.