

WORLD ROBOT OLYMPIAD 2008

Competition Rules – Regular Category

1. The rules of competition at WORLD ROBOT OLYMPIAD 2008 are constituted by the WORLD ROBOT OLYMPIAD committee (“the committee” in the following paragraphs), and are only applicable during this tournament.

1. A surprise additional rule will be announced on the morning of the competition.

2. Qualification for participation and team composition

1. Age of participants

Elementary school: The elementary school students who were born after Jan 1 1996

Junior high school: The junior high school students who were born between Jan. 1 1993 and Dec. 31 1995

High school: The high school students who were born between Jan. 1 1990 and Dec 31 1992

2. Team composition

A team consists of 1 coach and 2 or 3 contestants.

3. Material:

1. Except for specific designations in competition rules, materials used to assemble their robots, including controller, must be from LEGO® MINDSTORMS™ RCX and/or LEGO® MINDSTORMS™ Education NXT sets. Control programs must be ROBOLAB or LEGO® MINDSTORMS™ NXT software (Education version). A team using materials and control programs that are not approved by the committee will be disqualified at that match.
2. Teams should prepare and bring all the equipment, software and portable computers they need during the tournament.
3. Teams should bring enough spare parts. Even in the case of any accidents or equipment malfunction, the committee is not responsible for their maintenance or replacement. Coaches are not allowed to enter the court for any instructions and guidance during competition.
4. All the parts for the robot should be in the initial states (not pre-built) when the assemble time starts. For example, a tire cannot be put on a wheel until assemble time begins. Competitors may not use any instruction sheets or written, illustrated or pictorial. Contestants may make the program beforehand.
5. Robots are not allowed to use screws, glues or tape to fasten any components. Non-compliance with these rules will result in disqualification.
6. The motors and the sensors for the robot are supplied by LEGO, as shown in Figure 1. Any third-party products are not acceptable. Teams are not allowed to modify any original parts (for example: RCX, NXT, motor, and sensors, etc). A robot made with modified parts will be disqualified at that match.

4. Regulations about robot:

1. The maximum dimensions of the robot before it starts must be within 250mm × 250mm × 250mm.
2. Teams are allowed only one controller (RCX or NXT).
3. Amounts of motors and sensors are not restricted.
4. Any actions or movements by the participants are not allowed to interfere or assist the robot while it is running. Teams that violate this rule will be disqualified at that match.
5. A robot must be autonomous and finish the missions by itself. Any radio communication, remote control and wired control systems are not allowed while the robot is running. Teams in violation of this rule will be disqualified and must quit the competition immediately.
6. If robot is equipped with NXT as a controller, the Bluetooth function must be switched off and downloading programs must be done through USB cable.

5. Prior to competition

1. Each team can prepare for the match in their specified place until the check time. And team can't touch the competition court before announcing assemble time starts.
2. As it is said in the chapter 3-4, a team starts assembling robot from the initial-state parts. Judges will check the states of parts before announcing assemble time starts, and teams must show their parts separated. Teams cannot touch parts and PC during this check time.
However, when instructed to by the judges, the contestant can touch machine parts.
3. The assemble time doesn't begin until the committee announces it.

6. Competition

1. The competition consists of assemble time, 2 matches and maintenance time.
2. Contestants cannot assemble robot excluding assemble time and maintenance time.
3. Assemble time: 150 minutes
4. Contestants assemble after announcement from the committee, and can start the programming and test runs. Teams must place robot on the inspection area when assemble time ends. After the judge confirms that the robot meets all regulations, the match can begin.
5. After the first match ends, maintenance time of 10 minutes is given. Contestants can bring the robot back to assemble area, improve it and/or the program and do test runs. Contestants must put the robot back on the specified position when the maintenance time ends. After the judge confirms that the robot meets all regulations, the second match can begin.
6. The score calculation is done by the judges after each match. The contestants must be quick to sign the score sheet after the match of each team if they have no fair complaints.
7. The ranking is decided by the best score of two matches. If the competing teams acquire the same points, the ranking is decided by the score of the other match. If teams have it the same amount of points, those teams will have the same ranking.
8. If a violation is found at the inspection, the judge will give the team 1 minute to convert the violation. However, it is not possible to participate in the match if the violation is not corrected during the time given.
9. While assembly time is over, it is not allowed to modify or exchange the robot (for example: downloading programs, changing batteries). Team cannot request time out either.

7. Court

1. Team must assemble their robot in an area designated by the tournament (each team has its own area). Other people are not allowed to enter the competition area except contestants, WRO organizing committee staff and special personnel.
2. The standard of all competition materials and courts are according to what are provided by the committee on the competition day.

8. Prohibited matters

1. Destruction of competition courts, materials or robots of other teams
 2. Use of dangerous items or behaviors that may cause interference
 3. Inappropriate words and/or behavior toward other teams, audience, judges or staff
 4. Any other situation judges might consider as interference or violation of the spirits of the competition
9. The judges have final authority during the tournament. Their decisions will not and cannot be changed. Even if judges review the competition video, they may not change their decisions.
10. The score won't change even if contestants have any statement after signing the score sheet.
11. If a team is considered disqualified by any judges, robot of that team should quit that match immediately, and receives no score at that match.
12. The committee has the right to revoke a team's qualification if that team violates any rules.
13. Any communication devices and methods are strictly prohibited while the competition is in process. Anyone outside the competition area is also banned from talking to or communicating with contestants. Teams violating this rule will be considered as disqualified and should quit the competition immediately. If communication is necessary, the committee may allow team members to communicate with others under supervision by tournament staff.
14. If the competition is delayed due to unavailability of courts/models or incapability to determine scores, judges may hold a return match, and contestants will not raise any objections. If contestants believe that the courts or competition materials affect their score, they can address their opinions and request a rematch on the spot. Judges then will decide whether to hold a return match. Any opinions after the rematch will not be accepted. If a rematch is held, the score of the rematch will be the final; no matter if the robot finished the match or not.
15. If teams have any opinions or doubts, they must address them to the judges on the spot. The judges then must make a decision on the validity of these opinions or doubts. Any opinions addressed after the match will not be accepted after signing. If there is any disagreement or misunderstanding of the rules, the final decision will be made by the judges.
16. If there is anything not addressed by the rules, the final decision will be announced by the judges at the tournament. The judges have the utmost authority to explain and enforce the rules.

WRO2008 Eligible motor and sensor for regular


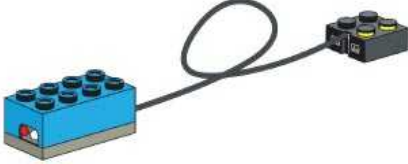

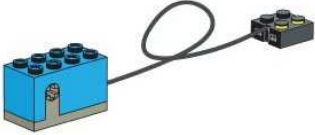






5225		LEGO TECHNIC GEAR MOTOR
9758		Light Sensor
9889		TEMPERATURE SENSOR (9V)
9891		ANGLE SENSOR (9V)
9911		TOUCH SENSOR AND LEADS
9842		Motor with Tacho
9843		Touch Sensor
9844		Light Sensor
9845		SOUND SENSOR
9846		Ultra Sonic Sensor

Fig.1 Usable sensors