

SUMO ROBOT RULES adopted by RoboGames.net

Section 1: Definition of the Sumo Match

Article 1 [Definition]

A match is fought between two teams, each team having one or more contestants. Only one team member may approach the ring; other team members must watch from the audience. In accordance with the game rules (hereafter referred to as "these rules",) each team competes on a sumo ring with a robot that they have constructed themselves to the specifications in Section 3. The match starts at the judge's command and continues until a contestant earns two wins. The judge determines the winner of the match.

Section 2: Requirements for Sumo Ring

Article 2

A 86 cm circle that has a 1 cm black perimeter on white board.

Section 3: Requirements for Robots

Article 3 [Robot Specifications]

1. A robot must fit within a 45 cm x 45 cm cube. A robot may expand in size after a match begins, but must not physically separate into pieces, and must remain a single centralized robot. Robots violating these restrictions shall lose the match. Robot parts with a total mass of less than 5 grams falling off from a robot's body shall not cause the loss of match.

2. All Robots must be autonomous.

3. The robot must have a name or number for registration purposes. Display this name or number on your robot to allow spectators and officials to identify your robot.

Article 4 [Robot Restrictions]

1. Jamming devices, such as IR LEDs intended to saturate the opponents IR sensors, are not allowed.

2. Parts that could break or damage the ring are not allowed. Normal pushes and bangs are not considered intent to damage.

3. Devices that can store liquid, powder, gas or other substances for throwing at the opponent are not allowed.

4. Any flaming devices are not allowed.

5. Devices that throw things at your opponent are not allowed.
6. Sticky substances to improve traction are not allowed. Tires and other components of the robot in contact with the ring must not be able to pick up and hold a standard 3"x5" index card for more than two seconds.
7. All edges, including but not limited to the front scoop, must not be sharp enough to scratch or damage the ring, or players. In general, edges with a radius of greater than .005", as would be obtained with a unsharpened .010" thick metal strip, should be ok. Judges or competition officials may require edges that they deem too sharp to be covered with a piece of tape.

Section 4: How to Carry Sumo Matches

Article 5 [How to Carry Sumo Matches]

1. One match shall consist of 3 rounds, each with a max length of 3 minutes, unless extended by the judges.
2. The team who wins two rounds wins the match.
3. When the match is not won by either team within the time limit the winner/loser of the match will be decided by judges upon a majority vote.

Section 5: Start, Stop, Resume, End a Match

Article 6 [Start]

Upon the judge's instructions, the two teams approach the ring, and place a robot within their half of the ring on or behind the line. When the judge announces the start of the round, the teams start their robots, players must clear out of the ring area.

Article 7 [Stop, Resume]

The match stops and resumes when a judge announces so.

Article 8 [End]

The match ends when the chief judge announces so. The two teams retrieve the robots from the ring area.

Section 6: Time of Match

Article 9 [Time of Match]

One round will be fought for a total of 3 minutes, starting and ending upon the judge's command. The clock shall start ticking five seconds after the start is announced.

Article 10

An extended match, if called for by the judge, shall last for a maximum of 5 minutes.

Article 11

The following are not included in the time of the Match:

1. The time elapsed after the judge announces start and before the match resumes. The standard delay before the match resumes shall be 30 seconds.
2. The time elapsed after a judge announces to stop the match and before the match resumes.

Section 7: Victory

When judges' decision is called for to decide the winner, the following points will be taken into considerations:

- Which robot is completely out of the circle or pushed to the point of being unable to deliberately return.
- Technical merits in movement and operation of a robot
- Penalty points during the match
- Attitude of the players during the match
- The match shall be stopped and a rematch started under the following conditions:
 - The robots are entangled or orbiting each other with no perceivable progress for five seconds. If it is unclear whether progress is being made or not, the judge can extend the time limit for observable progress for up to 30 seconds.
 - Both robots move, without making progress, or stop (at the exact same time) and stay stopped for five seconds without touching each other. However, if one robot stops its movement first, after five seconds it will be declared as not having the will to fight. In this case the opponent shall receive a win, even if the opponent also stops. If both robots are moving and it isn't clear if progress is being made or not, the judge can extend the time limit up to 30 seconds.
 - If both robots cross the outside of the ring at about the same time, and it can not be determined which touched first, a rematch is called.

Section 8: Violations Article 12 [Violations]

Players performing any of the deeds described in Articles 4, 13, or 14, shall be declared in violation of these rules.

Article 13 [Insults]

A player who utters insulting words to the opponent or to the judges or puts voice devices in a robot to utter insulting words or writes insulting words on the body of a robot, or performs any insulting action, is in violation of these rules.

Article 14 [Minor Violations]

A minor violation is declared if a player:

1. Enters into the ring during the match, except when the player does so to take the robot out of the ring upon the judge's announcement of victory or stopping the match. To enter into the ring means:

- A part of the player's body is in the ring, or
- A player puts any mechanical kits into the ring to support his/her body.
- Performs the following deeds:
 - Demand to stop the match without appropriate reasons.
 - Take more than 30 seconds before resuming the match, unless the judge announces a time extension.
 - Start operating the robot within five seconds after the chief judge announces the start of the match.
 - Does or says that which disgraces the fairness of the match.

Section 9: Penalties

Article 15 [Penalties]

Players who violate these rules by performing the deeds described in Articles 6 and 16 shall lose the match. The judge shall give the round to the opponent and order the violator to clear out. The violator is not honored with any rights.

Article 16

Each occasion of the violations described in Article 14 shall be accumulated. Two of these violations shall give one round to the opponent.

Article 17

The violations described in Article 14 shall be accumulated throughout one match.

Section 10: Injuries and Accidents during the Match

Article 18 [Request to Stop the Match]

A player can request to stop the game when he/she is injured or his/her robot had an accident and the game cannot continue.

Article 19 [Unable to Continue the Match]

When the game cannot continue due to player's injury or robot's accident, the player who is the cause of such injury or accident loses the match. When it is not clear which team is such a cause, the player who cannot continue the game, or who requests to stop the game, shall be declared as the loser.

Article 20 [Time Required to Handle Injury/Accident]

Whether the game should continue in case of injury or accident shall be decided by the judges and the Committee members. The decision process shall take no longer than five minutes.

Article 21 [Win Given to the Player who Cannot Continue]

The winner decided based on Article 19 shall win. The loser who already gained one round victory is recorded as such. When the situation under Article 19 takes place during an extended match, the winner shall gain one round victory.

Section 11: Declaring Objections

Article 22 [Declaring Objections]

No objections shall be declared against the judges' decisions.

Article 23

The lead person of a team can present objections to the Committee, before the match is over, if there are any doubts in the exercising of these rules. If there are no Committee members present, the objection can be presented to the judge before the match is over.

Section 12: Requirements for Identifications for Robots

Article 24 [Identifications for Robots]

Some type of name or number, to identify the robot (as registered in the contest) must be easily readable on the robot's body, while the robot is in competition.

Section 13: Miscellaneous

Article 25 [Flexibility of Rules]

As long as the concept and fundamentals of the rules are observed, these rules shall be flexible enough to encompass the changes in the number of players and of the contents of matches.