

SUMOBOT OFFICIAL GAME RULES

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The objective of Sumobot is for your robot to push the other robot out of the sumo ring. A match is fought between two teams; **EACH TEAM HAVING 1 MEMBER ONLY** will approach the ring. In accordance with the game rules each team competes on a Dohyo (sumo ring) with a robot that they have constructed themselves. The match starts at the judge's command and continuous until a contestant earns two Yuhkoh points. The judge determines the winner of the match.

Length of Match: 3 minutes, 1 minute per round

Robot Specifications

1. A robot must fit within a square tube of the appropriate dimensions for the given class.
2. The total mass of a robot at the start of a match must be under the designated weight.

Height	Width	Length	Weight
Unlimited	15 cm	15 cm	400g / 500g
Unlimited	20 cm	20 cm	1kg
Unlimited	20 cm	20 cm	3kg

3. 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. Screws, nuts, and other 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.

4. Robots must be autonomous. Any control mechanisms can be employed, as long as all components are contained within the robot and the mechanism does not interact with an external control system (human, machine, or otherwise).

5. Autonomous class robots must not start operating for a minimum of five seconds after initiation by the user.

6. 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.



Robot Restrictions

1. Jamming devices, such as IR LEDs intended to saturate the opponents IR sensors, are not allowed. **Reflective materials to disrupt IR distance sensors or IR line tracing sensors are not allowed.**
Scoopers/sweepers (expanding or not expanding) attached to any side of the robot must be colored black.
2. Parts that could break or damage the ring are not allowed. Do not use parts that are intended to damage the opponent's robot or its operator. 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. Devices to increase down force, such as a vacuum pump or magnets, are only allowed in the 3 kg class. They are not allowed in all other classes.
8. All edges, including but not limited to the front scoop, must not be sharp enough to scratch or damage the ring, other robots, or players. In general, edges with a radius of greater than .005", as would be obtained with an 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.

How to Carry Sumo Matches

1. One match shall consist of 3 rounds with 1 minute each round
2. A team receives a "Yuhkoh" point when they win a round. The team with the larger yuhkoh points at the end of the match wins.
3. The judge can choose to give extension rounds are given during a draw. A maximum of 2 extension rounds is allowed. Alternatively, the winner/loser of the match may be decided by judges, by means of weight, lots or rematch.
4. The decision of the judge to resolve a draw is final and cannot be appealed.

Start, Stop, Resume, End a Match

Start Upon the judge's instructions, the two teams bow to each other in the outer ring, approach the ring, and place a robot within their half of the ring on or behind the Shikiri line. (A robot or a part of a robot may not be placed beyond the front edge of

the Shikiri line toward the opponent. Note that is not required that a robot be placed directly behind the Shikiri line; it may be offset to the side, as long as it is behind an imaginary line collinear with the Shikiri line.) When the judge announces the start of the round, the teams start their robots, and after a five second pause the robots may start operating. During these five seconds, players must clear out of the ring area. The robot does not start it consider as false start. The judges give another round to start the game.

Stop, Resume The match stops and resumes when a judge announces so.

End - The match ends when the chief judge announces so. The two teams retrieve the robots from the ring area, and bow.

Time of Match

1. Each round has a maximum of 65 seconds including the 5 second delay. When no Yuhkoh point is scored, a draw is called. Exception is when the robot is about to fall when the 65th second is reached. The referee can extend to a maximum of 5 seconds just to win the Yuhkoh point.
2. A single timeout of 30 seconds can be requested between rounds. Only one timeout per player. A player who extends beyond the 30 second timeout can lose the round depending on the referee's call.
3. Referee must continue each succeeding round without delay. Any player who causes a delay in starting the next round when no timeout is called will lose the round depending on the referee's call.
4. The total time of the match is extended when extension rounds are called.
5. There will be 3 rounds per match. For the finals and semi-finals, there are 5 rounds per match. The match can be extended to a maximum of 2 rounds only.

Time out

During a time out, repairs to the robot are made but BATTERIES CANNOT be changed. Major repairs and battery changes are done after the match.

Yuhkoh

One Yuhkoh point shall be given when:

1. The robot touches the space outside the ring or completely falls outside the ring. The robot can be falling on its own or being pushed by the other robot.
2. ~~When **NO CONTACT** is made between the robots and one robot falls outside the~~

~~ring, NO YUHKOH is counted. The round is repeated. When the same robot falls with NO CONTACT for 3 consecutive rounds, the match ends and the robot that remained in the ring is declared the winner.~~

“NO CONTACT RULE” is SUSPENDED. When NO CONTACT is made between the robots and one robot falls outside the ring, YUHKOH is counted. The robot that remained in the ring wins the point.

3. When a part of the robot falls off or separates from the body while in the ring, the other robot wins the point. {exception for nuts and screws}
4. When a robot flips on its side or flips over; when a robot stops moving or spins around in the same location (no progress in movement) for 5 seconds; the other robot wins the point.
5. When all rounds of the match are completed and NO WINNER is found, the robot with the lighter weight gets the winning Yuhkoh.
6. ~~When a robot moves before the 5 second delay requirement, the other robot gets the Yuhkoh point. Referee advises the player to press the start button in a delayed manner so it will move after the 5 second “start call”.~~

Robots MUST HAVE a 5 second delay for every match. A robot that moves before the 5 second delay loses the round.

Exception: Judges can decide to relax this rule ONLY during the first elimination round. In such exception, the robot without a 5 sec delay can only place the robot immediately behind the shikiri line with its back touching the shikiri line. Player will press their START button to match the correct start of the round.

7. When the player touches any part of the playing field or any robot in the match directly or indirectly during a round, the Yuhkoh is awarded to the other robot.

Draw

1. When 65 seconds has lapsed into the round.
2. When the referee cannot decide on which robot fell first.
3. When during a contact, both robots are in a **deadlock position** and there is no progress in the position, after 10 seconds, a draw is called.

False Start

1. When at the start of the round, the player accidentally was not able to properly put the robot ON, a False Start is called – NO points are called, the round is repeated. Referees observe false start carefully.

Penalties

Sportsmanly conduct is expected from players. Any misconduct, foul language or intentional action to harm the opponent or the robot shall be dealt with by the table officials with the recommendation of the referee. Penalties can range from losing a round, a match or being banned for the day.

Injuries and Accidents during the Match

[Unable to Continue the Match] When the game cannot continue due to player's injury, the team mate can replace the player. If there is no replacement, the other player is declared the winner.

Declaring Objections

Only players can state an objection to the call of a referee. COACHES CANNOT INTERFERE.

Procedure:

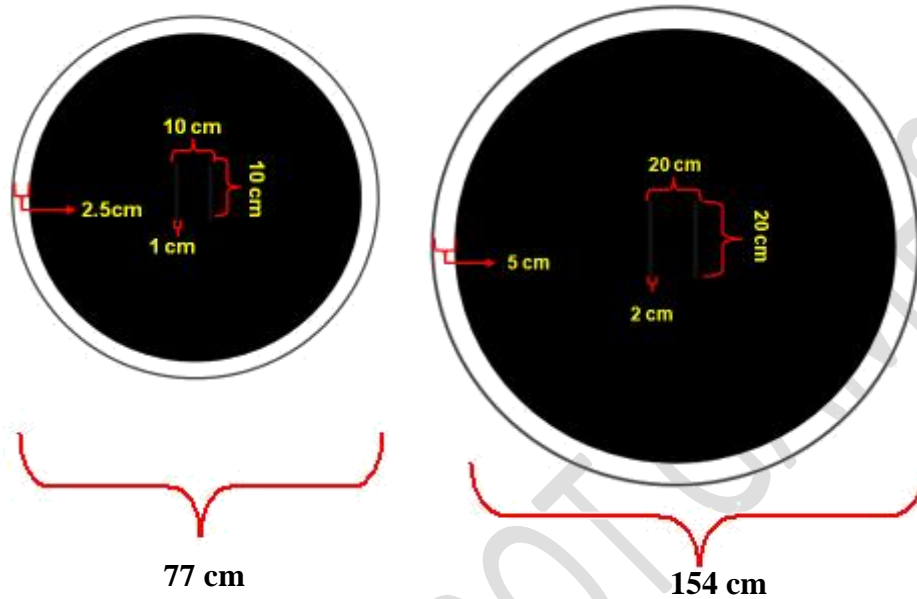
1. The player in the field calls the attention of the referee and states "Sir/Mam, I am objecting to a call".
2. A table official/judge is called to the field in front of the two players and the referee.
3. The objection is stated to the referee and judge witnessed by the other player.
4. The judge makes a FINAL DECISION within 60 seconds.

Playing Field

The dohyo interior is defined as the playing surface surrounded by and including the border line. Anywhere outside this area is called the dohyo exterior.

1. The ring shall be circular in shape and of the appropriate dimensions for the given size class.
2. Shikiri lines (starting lines) consist of two painted parallel brown (or equivalent for absorption of IR light) lines centered in the ring with appropriate width and spacing for the given class. The separation distance between the lines is measured to their outside edges.
3. The border line is marked as a white circular ring of a width appropriate for the given class on the outer edge of the playing surface. The ring area extends to the outside edge of this circular line. There should be a space appropriate for the given class outside the outer edge of the ring.

This space can be of any color, and can be of any material or shape as long as the basic concepts of these rules are not violated. This area, with the ring in the middle, is to be called the "ring area". Any markings or parts of the ring platform outside the minimum dimensions will also be considered in the ring area.



Sumobot Placing Guide

- Good Position



- Bad Position

