

Lafayette Lego Robotics Club

Sumo-bot Wrestling Rules

Lego Sumo-bot wrestling is a contest where two LEGO robot contestants try to push or flip each other out of a circular ring. The first robot to touch the floor outside of the ring loses. The last robot remaining in the ring wins.

The Sumo Ring information

Lego Robot Sumo wrestling takes place in a level circular ring four (4) feet in diameter with a white two (2) inch border along the ring's periphery. The surface of the ring is smooth plywood painted flat black and sits roughly one and one half inches above ground level.

How to Play Lego Sumo

The robots are placed on the ring about ten (10) Lego studs apart and an equal distance from the center of the ring. A ten (10) stud wide Lego block will be placed on the center of the ring. Each competitor will be placed against (touching) it before starting. The robots are set down parallel to each other and facing opposite directions so that the robots must actively search for the opponent and not merely "steamroller" straightforward. Robots must be capable of some form of movement across the ring surface... No cinder blocks.

When both contestants are ready, the ring judge will signal the start of the two (2) minute match at which time the robots must be activated (you must physically flick a switch on your robot). No movement can occur before the official start (no posturing). All robots are required to have a **four (4) second delay** otherwise they will be disqualified. **Players must clear out of the Ring Area once the robots have been activated.**

The robots will proceed in combat until one unit is disabled or removed from the ring. A robot is considered to be "removed" from the ring when any part of it falls off the edge and touches the floor. A robot whose body hangs over the edge is not considered 'off' until it physically tips off the edge and touches the floor. **Judgment of the ring officials is final.** A robot that disables or removes the enemy gets a "Win" credited to it, and if a robot "suicides", the other robot gets a "Win" credited to it.

Should one robot become disabled (flipped on it's back or side, for instance) and is unable to move, the ring officials will award the victory to the remaining robot. If it is determined by the judge that both robots are stuck in an entanglement or deadlock for at least fifteen (15) seconds, the judge will call for a Reset.

If the judge-declares a Reset, the clock is stopped, the robots are put back in starting positions, and the robots will be reactivated and clock restarted. A match is over after two (2) minutes or after one "Win" occurs. If no victor after 2 minutes , see "How to get points".

How to get points

This Sumo competition will be conducted in a fast-pace round points system style. Each Class competition will last for approximately 2 hours, depending on the number of contestants and number of rounds. At the end of the competition the points will be totaled and a winner determined. Points are earned as follows.....

two (2) point for "win"

one (1) point for "draw" or at the end of the two (2) minute round and no winner

zero (0) for loss

If in the event of a tie for a trophy place position, a final sudden death match will occur. Both robots will be reset to starting positions. The robots will be started for the final time. The first victory in four (4) minutes wins. In the case of two non-scoring robots, the judge will toss a coin to determine the victor.

The Classes

The robot must be built entirely from LEGO pieces in original factory condition without restriction on types or quantity except as listed below in the classifications. The robot cannot be held together by any means other than standard LEGO construction methods (such as stickers, tape, glue, oil). Robots must not receive any prompts or cues from the operator nor may robots reprogram or actively interfere with enemy sensors. **All robots must have a four (4) second delay.** The onboard computing device must be one or a combination of the following: Scout, Spybots or the MicroScout & RCX programmable bricks. Homebrew sensors, multiplexors and all other modifications to LEGO elements or their generic equivalent are prohibited. Both classes of robots must fit into a square box of 12 inches to a side, with no height limitation. Parts of the robot may extend outside this region after a match has started.

Classifications are as follows:

Stock – Robots will not contain more than one (1) RCX, two (2) touch sensors, one (1) light sensor and two (2) motors. All other robot specific rules apply. Weight not to exceed two (2) pounds.

Open – No limitation on quantity of elements used, no limitation on specific building elements used. All other robot specific rules apply. Weight not to exceed four (4) pounds.

More notes to consider

Robots must have enough power and stamina to compete for potentially 12 to 36 minutes throughout the tournament. Please consider battery accessibility and robot design.

During a match no changes in programming or construction of the robot are allowed.

At the end of each round, the contestants are responsible for making sure the ring is clean and ready for the next round.

A robot may not in any way deform the sumo ring. Robots are not allowed to use any flying components or projectiles. Robots may not electromagnetically interfere with the other robot or its sensors. Overt attempts to damage the opponent's robot, over and above the expected ramming and pushing, are not allowed.

The officials and/or Judges will disqualify any robot whose strategy or operation is considered too dangerous.