

# Chapter 1: Robot Sumo

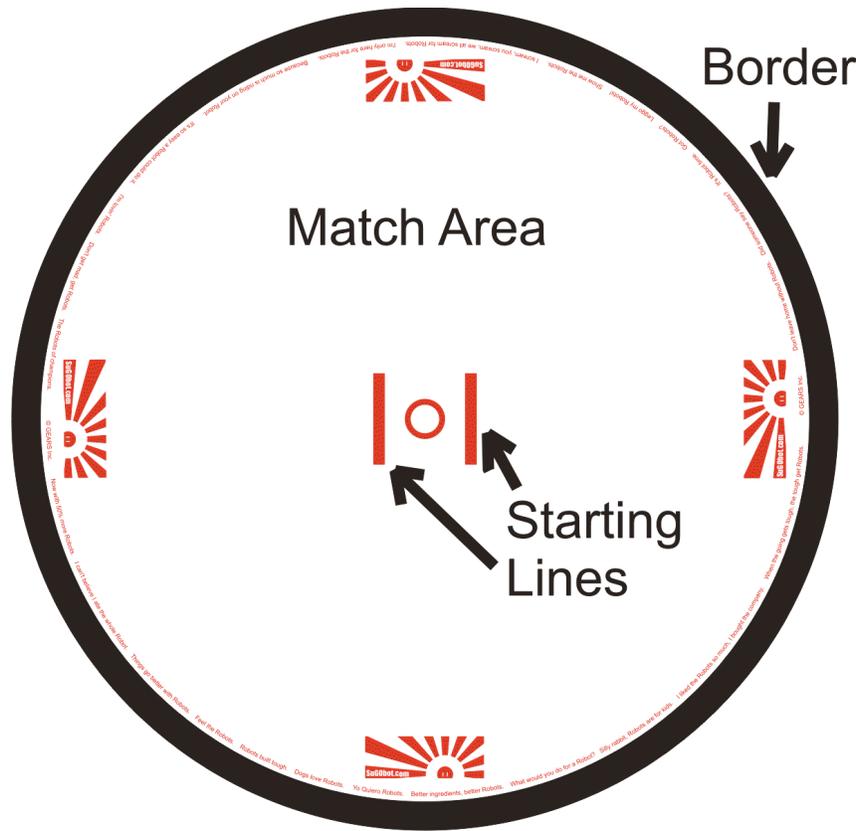
A Robot Sumo contest involves two contestants whose robots operate in the sumo ring according to the game rules presented here. SuGO is an acronym for a game that incorporates elements of Sumo wrestling and LEGO robotics. The individual contest continues until four SuGO points are scored by one of the contestants, or until one of the contestants has a score two point greater than an opponent. The overall contest is structured using a double elimination tournament format, where each robot must lose two matches to be eliminated from the tournament.

## Chapter 2: Playing Field Specifications

### Playing Field

The playing field is a flat cylinder with the dimensions as shown in the table below.

Diameter	Height	Border line width	Starting line width	Starting line length
36 Inches	0.5 Inches	1.0 Inches	0.5 Inches	4 Inches



### Field Interior

The field interior is defined as the area surrounded by and including the border line.

- The top surface is flat and smooth. The surface will be gloss-white in color.
- The starting lines are two parallel red lines centered on the field.
- The outer edge of the field, the border line, is a black circular ring.

### Field Exterior

The exterior area of the field extends at least 10 Inches from the border line.

## Chapter 3: SuGO Robot Specifications

- The robot must be able to fit inside a **7" x 7"** square box.
- The Robot Weight must not exceed **1 pound 10 ounces**.
- The Robot must be made ENTIRELY out of the NXT kit, with the only exceptions being the Infra-Red "eyes", and the batteries used in the NXT brick.
- A maximum of **2 motors** for movement **and 1 motor** for an optional tool/weapon can be used.
- The robot must be designed to wait five seconds after the contestant presses the robot's RUN button.
- All actions must be totally **pre-programmed**. The use of any form of remote control is prohibited.
- The robot will not include a device that obstructs the control of the opponent's operation, such as a jamming device or strobe light.
- The robot will not include any parts that might damage or deface the playing field.
- The robot cannot have any devices that damage or deface another robot beyond repair
- The robot will not include any part that fixes the robot to the playing field surface. The robot must always move.

## Chapter 4: Game Principles

- A standard game consists of **three matches** of **three minutes** each. The first contestant to win **four SuGO** points is the winner of the game.
- A contestant earns two SuGO points when their robot pushes the opposing robot off the playing field.
- The contestant who has the most SuGO points at the end of the game will be judged as the winner.
- When neither contestant receives any SuGO points, or both contestants have the same number of SuGO points, the winner will be decided by the judges. The judge will select the winner based on which robot was the most aggressive robot. However, if no obvious superiority exists and a winner cannot be determined, one extra three-minute match can be played to determine the winner.

## Chapter 5: Game Procedure

### Beginning of the Game

- Before the game, the **contestants greet** each other outside the playing field following the chief referee's instructions, and then enter the playing field. After that, the contestants can put their robot anywhere behind their starting line. No part of the robot can be placed in front of the starting line before the match begins.
- At the referee's signal, the contestant presses the RUN button on the robot. The match begins five seconds after the referee's signal. The contestants must exit the playing field when the match begins.
- Prior to the start of a match, the entire robot must fit inside a square box as defined for the weight class. At any time after the start of the match, the robot can expand outside these dimensions.

### End of the Game

- The game ends when the referee calls the winner. Both contestants should thank each other for a fair and competitive match after removing their robots.

### Match Cancellation and Rematches

A match will be stopped and a rematch will be started under the following conditions:

- The robots are locked together in such a way that no more action appears to be possible, i.e. they have rotated in circles several times.
- Both robots touch the exterior of the playing field at the same time.

- Any other conditions under which the referee judges that no winner can be decided.
- In case of a rematch, maintenance of competing robots is prohibited until a SuGO is observed, and the robots must be immediately put back to the location specified earlier.
- If neither of the competing robots win, or lose, after a rematch, the referee may reposition both robots to a specified location and restart. If that does not yield a winner, the match may continue at any location decided by the referee, *until the time limit is reached*.

## Chapter 6: Scoring SuGO Points

### Victory

Two SuGO points are awarded for a Victory. The following conditions define a Victory:

- When a robot ejects its opponent from the playing field with a fair action. The robot is considered ejected the moment any part of the robot touches the exterior of the playing field. A robot hanging over the edge of the playing field or touching any part of the cylindrical side of the playing field is not considered ejected, and the robot is still in play.
- When the opponent's robot goes out of the playing field on its own for any reason.
- When the opponent's robot stops moving on the playing field for more than 10 seconds.
- If the opponent's operator interferes with either robot, or the field, during the match.

### Advantage

One SuGO point is awarded for an Advantage. The following conditions define an Advantage:

- An opponent's operator fails to start their robot at the referee's command,
- The opponent's preparation for the start of the next match takes more than 30 seconds.
- Parts of the opponent's robot (weighing more than 1 ounce), are separated and dropped from the robot.
- Any other actions occur that are deemed unfair by the judge.

## Chapter 7: Violations

A contestant who takes any of the following actions will be disqualified from the game:

- A contestant does not attend the appointed playing field when called at the beginning of the game.
- A contestant ruins the game, such as by intentionally breaking, damaging, or defacing the playing field.
- A contestant's robot does not meet the robot specifications.
- A contestant displays unsportsmanlike behavior.
- A contestant intentionally injures the opponent's operator.

## Chapter 8: Injury and Accidents

### Request for Suspension

When a contestant is injured due to the operation of the robot or the robot has an accident, and the game cannot be continued, the contestant can request a suspension.

A referee must take immediate action necessary to take care of this situation.

## **Chapter 9: Objections**

### **Objections to the Referee**

No objections to the judgment of the referee can be raised.

### **Objections to the Rules**

A contestant who has an objection to the operating rules must express dissent to the Tournament Committee before the end of the game.

## **Chapter 10: Specifications of Robot Markings**

### **Marks on the Robot**

The robot must not be marked with any words, symbols, or images that are offensive to the general public.