

# 2019 STEAM CUP

## ROBOT WRESTLING

v.2020.1

Participant (age)	Team Formation	Game Method	Robot Condition	Robot Type
Under 15	1 person/team	League & Tournament	Pre- Assemble	Remote Type

### 1. Category Summary

Robot Wrestling category must understand function and H/W of robot to win the battle. Use contestant's creativity and assembly skills to perform their competition.

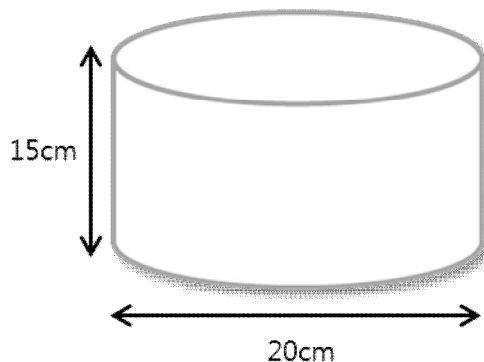
### 2. Robot Standard

#### A. Robot Specification

- Only allows **ROBOTIS Dream Kit** to participate competition
- Robot's only allow to use **single LB-041** (Li-ion 3.4V 1300mAh) battery.

#### B. Robot Component

- Robot must be pre-assembled to participate on competition.
- If robots cannot be pre-assembled in advance, participants are allow to assemble their robots inside competition hall. However, there will be no additional time and venue will be provided.
- Robot size is limited to fit in circular container (Size will be check after robot's power on) and size of circular container would be 20cm of diameter and 15 cm of height.



- Total weight of robot must be less than **300g** (Including battery).
- Movement of robot must leg type and no limits on number of legs. (Specific details are attached)
- Communication method of the robot only allow method that include in the product. In addition, if participant wish to control with smart device, they are allow to use Bluetooth communication.

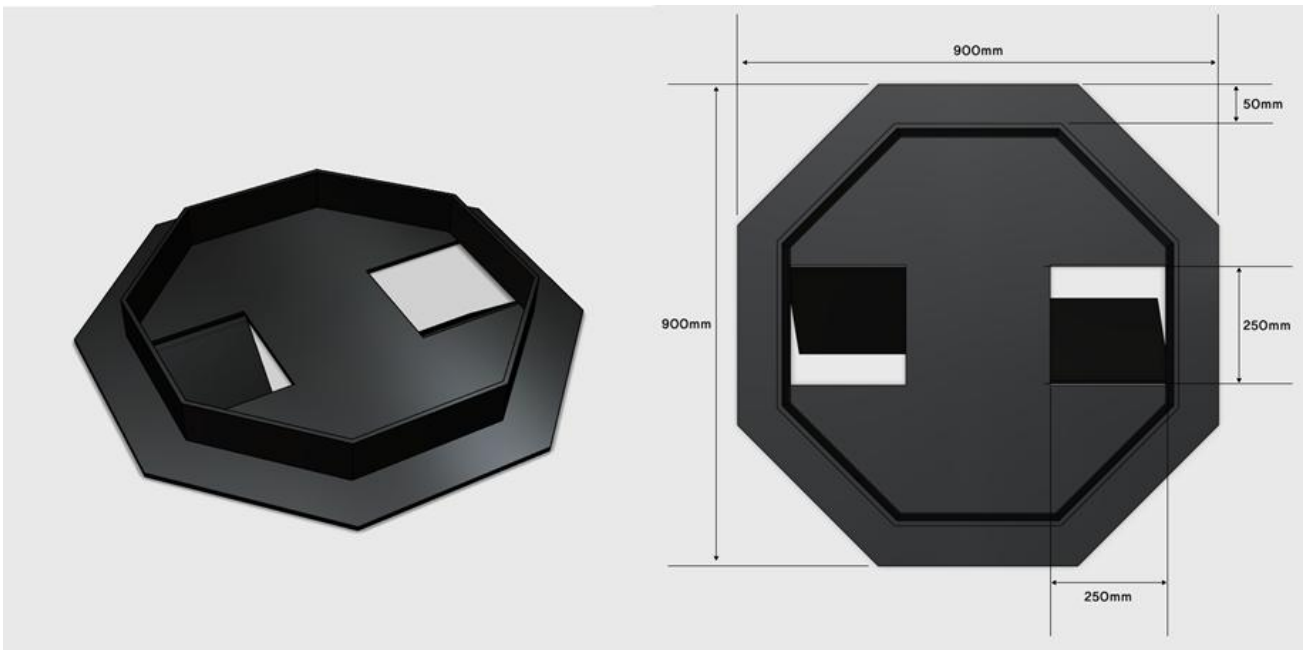
vii. **Modification of battery is strongly prohibited for all participant.**

viii. If the participant violate any of above rules, participant will automatically be disqualified.

## 3. Arena Regulation

### C. Arena Structure

- i. Arena for Robot Wrestling is structured with eight angles based and built up with outer walls to prevent robot's falling(please refer the image below). Two trap holes are installed for competition purposed. (Error range of the arena is  $\pm 10\%$ ),



## 2. General Rules

### A. Competition

- i. Control the robot and put opponent's robot into the trap will win the match.
- ii. Total match time is 2 minutes and trap will opens 30 seconds after start time. Contestant must put their opponent's robot in any trap.
- iii. Robot will start from located starting position and they can not start from any other spot. **However, referee may change start location according to special situation.**
- iv. Competition will be operate with league and tournament. But this can be changeable due to special situation.
- v. Every match will be decided by single match and each match play with 2 minutes time. If opponent disqualified or given up their match, opponent will automatically wins the match.

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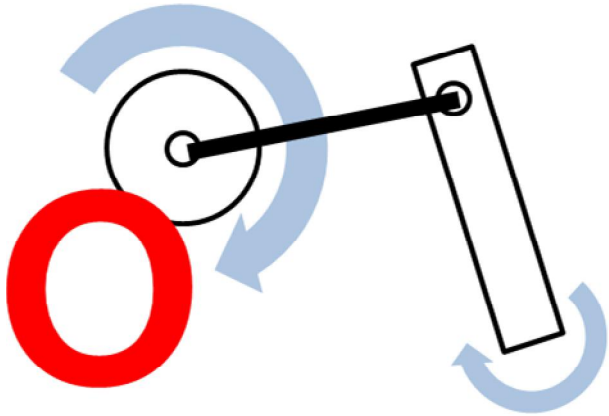
## B. Evaluation

- i. If match does not end after 2 minutes period, match will report as drawing for league game and tournament will have rematch(single time) for another 2 minutes.
- ii. If the contestant touch their robot during the match without referee's permission, contestant will automatically lost the match.

## C. Others

- i. There will be no practice time before the match start.
- ii. Any damages of robot will not be responsible for organizer.
- iii. Anything not included in this regulation will be played according to the decision of the steering committee.
- iv. This competition strictly prohibited from their parents, teachers or any other relevant to give any advice to the contestant. If the rules are violated, the participant and the related party will be leave from the event.
- v.

[Attached 1] Assembly Leg Details

	
<p>Movement of leg : Directly connect each leg from the motor is prohibited. (Wheel type movement is not allowed)</p> <p>Exception : if the leg is directly connect with wheel and linked with other legs, it is acceptable.</p>	<p>If the motor is connected with link structured type (leg is indirectly connected with the motor), it is acceptable.</p>