

Super Scramble **Light (SSL) & Heavy (SSH)**

Effective September 11, 2019

Text in RED is new for 2020

Competition Code: **SSL (Light) & SSH (Heavy)**

Control Type: Tethered or Autonomous.

Open to Grades: All up to Senior 4.

Size Limit: 1 meter perimeter; 20 cm maximum width; 17.1 cm maximum height to pass under "Ball drop".

Weight Limit: SSL <750 grams. SSH < 3Kg.

Note* It is highly recommended that a method be incorporated into the robot design to adjust the weight if the intention of the team is to attain the maximum weight at registration.

Competition Objective: **Your robot** is required to accept a payload of one 25.4mm steel ball bearing and deliver this payload into a receptacle at the other end of the playing field, after crossing uneven terrain. (See dimensions of Ball Drop and Receptacle below)
The task is completed when the first robot to deposit its payload into the bottom of the receptacle which will trigger **Blue** lights above denoting the winner.

Competition Procedure: **At the judge's** instruction, the robots are placed at opposite ends of the playing field in a position to accept the payload from the overhead loader.
Contestants will position themselves one on each end and each side of the playing field closest to the Ball Drop and will try not to hinder their opponent.
When both contestants are ready, the judge will signal the start of the three minute bout by releasing the payload.
It is suggested that, for autonomous robots, the start mechanism could be derived from the seating of the steel ball (payload).
A team may halt the start, just once, no later than 10 seconds after the start. This allows for last moment emergencies such as forgetting to plug in a battery. The team must complete any repairs and be ready to compete within one minute.
If robot tethers become tangled, both contestants will stop their robot's progress to allow the controllers to be passed through until the tethers are free at which point the competition may resume.
Each bout will be up to three minutes in length and spaced five minutes apart unless dictated by the judge in charge.
Bumping of the opposing robot is allowed, however intentional blocking is not allowed.

Any robot found departing the top surface of the playing field will be assumed to have lost that bout.

Other restrictions: **Any robot** found losing its body parts will also lose the bout except for a single screw or nut (of no more than one cubic centimetre) falling off.

For autonomous robots, a homing beacon may be placed at the goal end prior to the start of the round.

* **Power may** be contained within the hand controller; but to a maximum 6 volts, or onboard up to 12v. (See General Rules regarding tether details)

* **No Fuel** Cells allowed.

* **Lithium Ion**, Lithium Polymer may be used under strict conditions (see MRG General Rules p3).

Playing Field Size: **Width will be** 600mm. Length will be between 6.7m and 7.9m depending on which track modules are used.

Field Construction: **The playing field** is composed of interconnected 2 foot square modules and will roughly symmetrical from end to end. The centre module may allow only one robot to pass at a time.

Field Obstacles: **May include:** rope bridge, simulated whirlpools, textured from smooth undulating through sandy to pebble and/or river washed rock, and more. Must keep your wits about you as there are no barriers to the edge of the playing field though we will provide some cushioned protection for falling robots.

MRG General Rules: **Please review** the Manitoba Robot Games General Rules which may be found on the Competitions page.

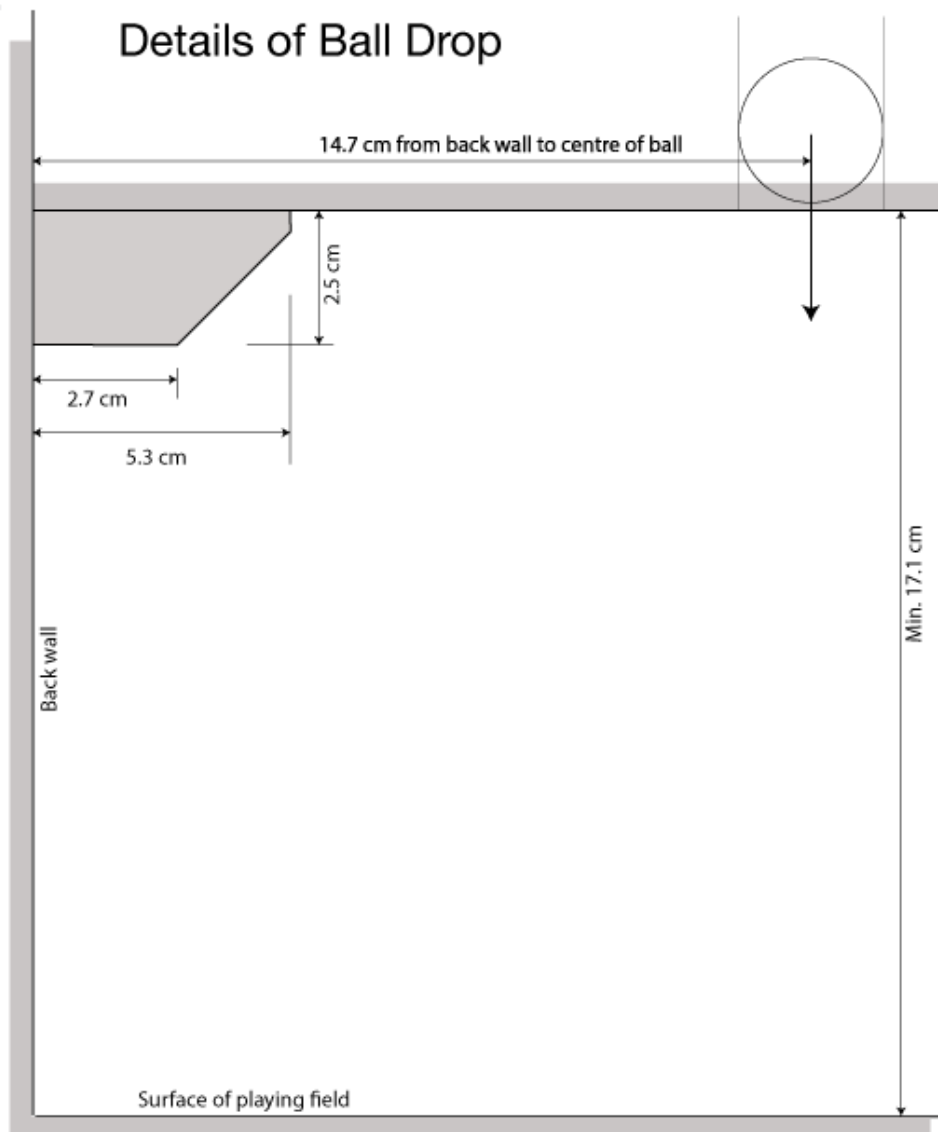
Failure to follow the MRG General Rules may result in the following:

Warning being issued.

Disqualification and loss of match.

Disqualification from competition and or event.

Dimensions of the Ball Drop and Receptacle



Receptacle

