

Q: What are the details for the flag? How is it raised?

A: The flag should be attached to your robot and raised when you return to your home base and would like to end the round. Methods you use to raise it are up to your discretion.

Q: To be clear this means that the flag must be small (less than 3 inches) since the robot is only allowed to extend that far in the process of raising the flag?

A: The flag itself has no dimension restrictions, with the exception of it cannot exceed the dimensions of the robot. The only requirement is that your robot in general stays within the overall robot dimensions described in the rules (9in x 9in x 11in when stationary).

Q: Is there a size requirement for the flag? Can it be an LCD?

A: Any material not prohibited in the rules is allowable. LCD is acceptable as long as it is "raised".

Q: What happens if the robots in the hardware competition collide with each other? How is fault determined?

A: Fault is not assigned unless it is obvious to the judges that a robot intended to cause damage or disturb the progress of the other robot. The required bumpers are intended as safe guards to prevent catastrophic damage to one another's robots. Hopefully the bumpers would prevent any but cosmetic damages.

Q: Does the robot have to remain in constant contact with the playing field (a.k.a can it fly as long as it does not leave the bounds of the arena?)

A: For safety and security reasons it is required that the robot remain in contact with the playing field at all times.

Q: When in motion, can the robot extend 3 inches past the max dimensions or 3 inches past the dimensions of our robot?

A: The robot cannot extend past the maximum dimensions of 9 in x 9 in when in motion. Reason being that extensions should remain within the bumper.

Q: Can the bumper move?

A: The bumper may move so long as it does not exceed the maximum robot dimensions and remains as the outermost part of the robot during motion.

Q: Do the objects count as part of the size requirement? As in, if the robot is holding the object outside of its dimensions in movement, will the object then be considered part of the robot?

A: If the robot is pushing the objects, presumably with the bumper, then they would be considered "free" and therefore external to the robot dimensions. If the robot is retaining the objects, presumably within the bumper, then they would be considered "retained" and therefore a part of the robot dimensions when in motion.

Q: How round are the cube corners supposed to be sanded to?

A: There is no particular degree of rounding for the cubes. This has been a conundrum for the committee for quite some time as we struggled with a specific method to achieve the rounded edges / corners. The goal is simply to reduce as much carpet snag as possible. The rules update will contain new information on some pre-rounded cubes. If you've already purchased or made cubes just try your best to round or chamfer the corners.

Q: How thick should the bumper be?

A: The bumper thickness is up to your discretion, just keep in mind the overall robot dimensions.

Q: What material should the bumper be made of?

A: Materials are up to you, this is the case for everything, the only rule of thumb is: any material not prohibited in the rules is allowable.

Q: What does it mean that the surface of the bumper can be of any shape, but it must have a radius of curvature greater than 1 cm? Having a minimum radius of curvature suggests that [the bumper] should not have corners or edges, is this true?

A: Correct, this means that there should be no sharp edges or corners. This is in hopes of reducing damage, with other robots and/or the playing field, in the event of collision. Let me emphasize one key component of this rule, we will NOT be measuring the degree of curvature. You need only to make sure your robot is not sharp (and by extension damaging to the playing field and/or others).

Q: Is there a minimum thickness for the bumper?

A: There is no minimum thickness for the bumper. It is suggested only that you consider, in the event of collision, [the bumper] should not break or snap.

Q: Is there a cut off on how many times the robot can orbit in counterclockwise motion?

A: There is no limit to the number of orbits. The only cut off is the time constraint.