

2014 Robofest Rule Clarifications

12-20-13

- The balls and the egg with packaging may only be placed on the robot over home base.
- Any egg packaging is considered part of the robot.
- If the ball bounces into the box, then bounces out, it will be scored as in the box.

1-24-14

- Regarding the starting orientation of the robot for Game:
For Qualifiers: The starting orientation will be unveiled as part of the unknown factor unveiling.
For MI & World Championship: The starting orientation will be unveiled after impounding.
- Before starting a Game, when Sr. division teams prepare the setup, they are definitely NOT allowed to move the robot close to the box to adjust the height of robot arm.
- Game coaches should make a point of instructing the students in the calculation of volume without the use of a calculator. In addition, coaches should teach students logic, ratio, proportion, math operation, measuring and geometry. (2-18-14)
- For qualifying competitions, there will be three water balls (2-24-14)
- No items are to be placed on the game playing field (ie red cards, clipboards, etc) (2-26-14)

Frequently Asked Questions (FAQs)

AMD Game

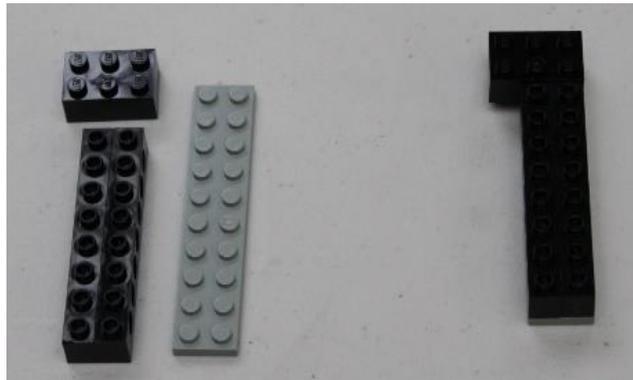
1. *Can we intentionally program the robot to move the box?* No, intentional movement of the box is not allowed. The box may be taped down.
2. *Can we put the tennis balls and the egg into packaging on the robot and then drop the packaged ball/egg in the box?* Yes, that is correct. Your team puts the egg in to your container after the game starts. Yes, you can put tennis ball into packaging and drop the packaged ball into the box. If multiple packaging is used, all packaging must be brought with robot for measurement. Judges will measure robot with largest package, if all are not identical.
3. *The 2014 Game rule clarification tells us that any ball/egg packaging is part of the robot. If a team drops the package in the box and returns home is this a penalty since part of the robot would be "dropped".* If the ball/egg enclosed in packaging is dropped in the box or

meltdown zone, teams are allowed to touch it to remove packaging for reuse. Packaging once dropped in the box or meltdown zone is no longer considered part of the robot. If the packaging is reused, once it is around the ball/egg and it is placed on the robot it will be considered part of the robot again.

4. *The rule just says 70cm [for max size of robot], is it a diameter or is it length and width so a diagonal may exceed 70cm?* The maximum size is 70 cm for length, width, or diagonal.
5. *The clarifications say the gauge blocks between the box and table stay in place and they are an unknown color. When these blocks are light in color and left in place they have caused robots to run off the table in the past. They need to be the same color for all tables to keep it fair. Leaving them in place somewhat undermines the whole light table on a dark surface so it would be best if they were either black or removed. New teams that overlook this will more likely have issues.* Good point. The Lego blocks will be the same color for each playing field at a site. Lego pieces will be dark in color.
6. *In Fig2, it says "some structure will be added to this zone". (I assume it also applies to Sr. game in Fig.3). What exactly is the structure? Is it 3D object (with height) or just a piece of paper (flat on the table)? If it is a paper, what color is it? Simply speaking, is it something that will interfere with the sensor readings?* Just letter size papers. Color will be white, but there will be a space between the table and the paper.
7. *Is the edge of meltdown zone specially marked (like with the green lines shown in the PDF file)?* No. But the paper edge will tell the imaginary line.
8. *In Fig.3, the distance (d) is 21.6cm according the table. Since it is fixed, it means that the locations of two green lines (edge of meltdown zone) have to be changed too when the angle of the box is changed, correct?* We plan to put the paper same as in the Figure. We will post pictures later.
9. *Is the robot allowed to touch the nuclear reactor (box) with something like a touch sensor? How heavy is the box (I know a plaque will be put into it)?* The box can be touched. Red card will be given only when the box is reset. The weight is unknown, but it will be heavy.
10. *What color will the box be? It seems that the box should have pre-defined one set color or teams will have a hard time using sensors to measure length.* Unknown, but not too bright. That is one of the challenges of this year's game.
11. *Are red cards only -2 points this year or is that a mistake?* -2 point is correct. We plan not to discourage teams. Too many teams got negative scores in previous years.
12. *Is it possible to use substances to prevent the egg shell from breaking?* Only substances which can be fully removed from the egg may be placed on the egg. The substance cannot permanently adhere to the egg.
13. *Is the packaging provided by the team? Can a foam liner be used inside the egg packaging designed by the team?* The team may construct external packaging for the egg if they wish. The packaging must be removable from the egg after the game.

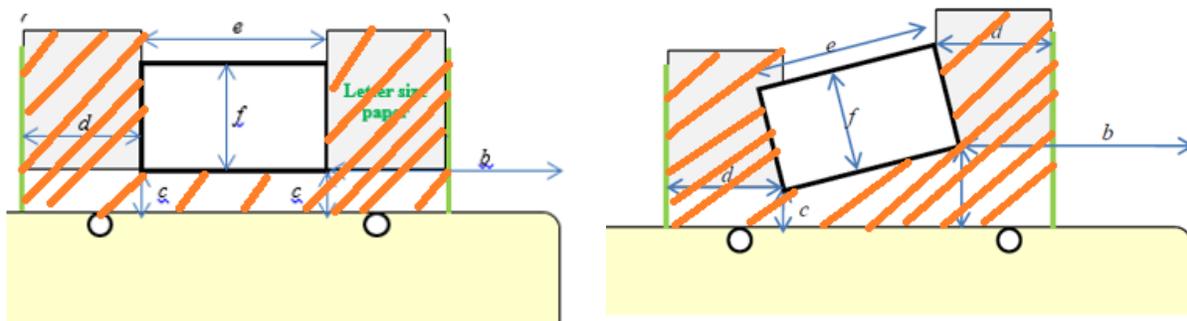
14. *Is there a limit to the size of the egg packaging?* Yes. Any egg packaging must be included in the 70 cm total robot size limit. It is recommended that any packaging fits in the minimum sized box. When the robot is brought to Impounding for measuring, the egg packaging must be brought as well and attached to the robot. After measuring, the egg packaging will be removed in preparation for the first round.
15. *How is a “crack” in the egg determined?* Any visible deformation to the egg’s surface will be considered a “crack”.
16. *Can you provide some guidance on what type of egg will be used (i.e. ostrich egg or chicken egg)?* Hard boiled chicken eggs will be used but the actual dimension and size of eggs is unknown.
17. *Does Robofest provide the egg and tennis balls?* Yes, they are part of the game playing field.
18. *Can a plastic egg with weights inside be used instead?* No, part of the mission is to make sure the egg does not crack, so only real, hard boiled chicken eggs will be used.
19. *Can teams be putting the egg into their container/packaging while the robot is still moving?* Yes, the egg may be placed into the package, but not onto the robot, while the robot is moving. The egg with packaging may only be placed on the robot over home base.
20. *Will a penalty be assessed if players touch the robot as they are placing the ball/egg on the robot if it’s not over home base?* Yes, a penalty will be given if a player touches the robot anywhere other than over home base, and the ball/egg may only be placed on the robot over home base.
21. *Can the first tennis ball be loaded prior to the game clock starting, or must it be loaded after the game clock starts?* After the clock starts.
22. *How far into the table are the batteries located?* Batteries will be located on the edge of the table.
23. *If the team says they are done and the robot is still moving is it ok for players to pick up the robot to show the volume to the judges without penalty?* Yes. Game is officially over when the team declares it is done.
24. *Is there an advantage to finishing before the two minutes are up?* No, time is not a tie-breaker; the only requirement is that the robot finishes within the two minutes.
25. *What happens if the ball goes into the box, and then bounces out?* The ball will be scored as in the box.
26. *Will volume be counted if it is displayed before the end of the game?* No. Volume must be displayed at end of game.
27. *Can the orientation of the robot be changed by the team at home base?* The team can touch the robot at home base without penalty. If the robot is picked up at home base, the robot must be placed in starting orientation when placed back down.

28. *If the robot is touched at home base, does the robot have to be re-oriented to the starting position?* If the “touch” changed the direction of the robot, then the robot must be placed in starting orientation.
29. *Can the robot carry more than one object at a time?* No
30. *Do the tennis balls and egg have to be placed on the robot or can the robot pick them up?*
The robot may pick up the balls/egg at home base, only one at a time. However, given the capabilities of existing robots, it is not recommended.
31. *What is the “Meltdown Zone”?* *Is it a physical barrier?* The Meltdown Zone is presented in the diagram in the rules in Figure 2 on page 3. It is a playing field around the box, indicated by a sheet of paper 8½” wide, and it may have a flat structure along some edges, no higher than 2 cm; the ball could possibly roll out of the Meltdown Zone.
32. *Can students ask to have the spacing blocks removed prior to or during the rounds?* No, the teams may not request to have the spacing blocks removed; they are part of the playing field.
33. *What is the Lego structure between the box and table going to look like?* Below is a sample. The actual structure that will be used may be different, as mentioned in the rules. Maximum height of the Lego structure is 2 cm. The Lego structure is part of the playing field and cannot be removed.



34. *Are hand signals allowed?* Hand signals to the robot are only allowed when the robot is over the home base and are prohibited if the hand signal changes the direction of the robot.
35. *Are sensor interactions allowed outside of home base?* Sensor interactions with the human player are not allowed outside of home base.
36. *Are remote controls allowed to start the robot at home base?* No, remote controls are not allowed to start the robot at home base, nor for any purpose at any time. Remote controls are not allowed in the game competition.
37. *Can I ask for a ball/egg reset?* No, there is no ball/egg reset.

38. *What if the robot fails to drop the ball/egg?* If the robot fails to drop the ball/egg, the team may pick up the robot (with the ball/egg still on the robot) and restart the robot from home base with the same ball. One red card will be given for picking up the robot.
39. *How will eggs be checked before the game?* Team members are responsible for inspecting egg with judge prior to their round. After the round, the team members will remove the egg from packaging (if any) and show egg to the judge.
40. *What if the robot falls off the table holding the ball, and then ball falls out?* This ball is considered a dead ball.
41. *If the robot or human player drop the ball, can they try again with the same ball?* Only at home base. If the robot or human player drops the ball while the robot is on home base, they are able to re-use the ball.
42. *Where will the batteries be located?* The batteries must be located along the edge of the table in front of the meltdown zone, and the gap between the battery and table edge must be less than 1cm. The exact location of the batteries may vary from playing field to playing field.
43. *What happens if the batteries get stuck under the robot while the robot is trying to clear them?* The team can 1) ask for a reset of the playing field and the batteries will be reset (red card) or 2) continue the game and the stuck battery will be scored as “uncleared”.
44. Clarification of Meltdown Zone. Diagonal lines show area of meltdown zone.



General Information

1. *Has the exhibition rubric changed from last year?* Yes it has changed slightly. The new rubric is online – www.robofest.net → 2013-2014 Programs → Exhibition
2. *Can teams register and compete in more than one qualifying competition?* Yes, as long as the registration fee is paid at every site that the teams register for.
3. *Can groups use the same robot for multiple teams?* No. Each team must have their own robot.

4. *On competition day do we have any awards for team spirit?* The team photo award is the closest award we have for team spirit.
5. *Will Robofest be selling old game tables?* No, we are currently sold out of the old tables
6. *What table is the right table to buy for game table?* The Lowes Item number for the table is 124784, and it sells for approximately \$50.00. It can be purchased in Lowes stores where available, or you can order it on-line and have it shipped to your local Lowes store at no additional cost. It can also be ordered from Lowes on-line and shipped to your home, however the shipping cost may be approximately \$59.00 additional. This link will direct you to the appropriate table at Lowes: http://www.lowes.com/pd_124784-88126-80296_0
7. *Where will the North American Championship be held?* At Lawrence Tech, May 3, 2014.
8. *How many spots will there be for the open competitions at the North American Championship and World Championship?* We do not know at this time.
9. *Will there be webinar access for any of the workshops?* Webinar replays and other resources are available online at www.robofest.net, in the "Tech Resources" section.
10. *Will ROBOT C training workshops be offered?* Robofest will offer many workshops in the spring. It has not yet been determined which topics will be offered. Please continue to check the Robofest website to see the latest available workshops.