

Frequently Asked Questions

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The answers for 1st to 16th questions were provided in Sep. 12, 2004. The answers for 4th , 6th and 16th questions were modified in Nov. 2004. The answer for 14th question was modified in Mar. 2005.

1. Could Automatic Machines climb on the Beacon Tower from the edges without slope?

A: Of course, it can.

2. Is it necessary to put Fuel Ball/s into the green canister of the Main Torch?

A: If you want more scores or try to complete “climb on the Great Wall”, your robot must feed Fuel Ball/s into the green canister of the Main Torch.

3. Could a Manual Machine transfer Fuel Balls to its own team’s Automatic Machine/s?

A: The action to transfer the Fuel Ball to its own team’s Automatic Machines is not forbidden, providing that the Manual Machine does not enter or extend its parts over the Automatic Zone and touch the Automatic Machines.

4. Could robots handle the Fuel Ball falling on the ground?

A: Both Manual and Automatic Machine can handle their own Fuel Balls, providing that they do not enter or extend their parts over the Zones, which is set in the rules. If anyone picks or uses the opponent’s balls, it will be considered as violation.

5. Could a Manual Machine takes the Fuel Balls that the opponent has put into the Bonfire Fuel Disk out of it?

A: Of course, it can, but, it can’t enter or extend any of its parts over the Bonfire Zone.

6. Could an Automatic Machine take out the **opponent’s** Fuel Ball that has been fed into the fuel canister?

A: Yes, it **can’t**.

7. Could a Manual Machine enter the opponent’s Fuel Stock?

A:, If a Manual Machine enters the opponent’s Sock when there are Fuel balls in it and changes the Balls’ positions, it will be considered that the field establishments are destroyed, and the team will be disqualified. If there is not any Ball in the opponent’s stock, a Manual Machine is permitted to pass through the Stock.

8. Could a Manual Machine feed Fuel Balls into the canisters of the Outer Torch?

A: Yes, it can, but it can’t enter or extend its any parts over the Automatic Zone.

9. At the beginning of the game, is the initial direction of Main Torch random?

A: Yes, because the Main Torch can rotate around the axis of its own torch pole when outer forces are applied. Before a game starts, referees would not make the Main Torch rotate to a special direction.

10. When a team retries, could the Automatic Machines running normally be moved to the Start Zone and restarted?

A: Yes. The rule only limits the number of the retry to one, but does not limit the number of restarting the Automatic Machines in one retry.

11. Can robots touch the Torches?

A: Automatic Machines can touch the Torches, but Manual Machines cannot.

12. Can a Manual Machine transmit signals to its own team's Automatic Machines?

A: No, it can't. Automatic Machines must be autonomous. They are not allowed to receive any incoming signals.

13. When a game ends, if 1 red ball and 1 blue ball are put in the red canister of the Main Torch, and 1 red ball and 1 blue ball are put in the green canister, how does it score?

A: The scores for the red and blue balls in the red canister belong to the red team, which means the red team gains 10 points. 1 red ball in green canister gains 5 points for the red team and 1 blue ball in the green canister makes the blue team 5 points also. Thus, the red team gains 15 points, while the blue team gains only 5 points.

14. If an Automatic Machine extends its parts over the Bonfire Zone, is it considered a violation?

A: If the Automatic Machine does not try to feed any fuel ball to the fuel disk **and does not perform any actions intentionally**, extending its parts over the Bonfire Zone will not be considered as a violation.

15. What does "Automatic Machine that climbs on the Beacon Tower" mean?

A: It refers to an Automatic Machine whose any parts does not touch any field facilities except those in Beacon Tower Zone.

16. If a team's Automatic Machine not climbed on the Beacon Tower or Manual Machine feeds the Fuel Ball into canisters of the Main Torch, how will it be treated?

A: **In the Rule Book, it is enhanced that all Fuel Canisters of the Main Torch must be fed by the Automatic Machine which is on the Beacon Tower Zone, refer to Rule 5 (3) c. All participants must follow this rule. If a team's Automatic Machine not climbed on the Beacon Tower or Manual Machine feeds the Fuel Ball into canisters of the Main Torch, it will be considered as an action against the spirit of fair play. The team will be disqualified.**

The answers for 17th to 24th questions were provided in Nov. 21, 2004.

17. Is it allowed for Automatic Machine(s) to climb the Torch Pole?

A: Yes, It is allowed, but the Machine(s) can not make the facilities of the game field damaged.

18. If Manual Machines of both teams do not dodge with each other, how is this situation treated?

A: Referees will designate different moving path for them to avoid collision and stalemate.

19. If Manual Machines of both teams collide each other in Manual Zone, how is this situation treated?

A: Referees will treat the situation according to their own judgements. If a team's Manual Machine is doing its own normal tasks, for example, picking up or feeding Fuel Balls, another team's Manual Machine operator has a mind to collide it, such an action belongs to that against the spirit of fair play. If both teams' Manual Machines collide each other when they are all moving, referees will force them to separate and order them to move in opposite directions.

20. Could a team use different robot combinations for different games?

A: Yes, it can. Committee does not advocate each team to make many machines for the game, but does not oppose any team using different machines in different games, provided that each team can use only one Manual Machine in a game, and the total weight of all Machines used in the game must not exceed 50kg.

21. Could the Manual Machine touch or extend over the slope when it tries to feed fuel balls into the Fuel Disks of the Bonfire Zones?

A: No, it can not. In the Rule Book, it is specified that the Manual Machine can not enter and extend it any parts over the Bonfire Zone sized 1200mm in diameter. The slope is located in the Bonfire Zone.

22. Could Automatic Machines cover opponent's canisters?

A: Of course, the opponent's canisters may be covered, but it can not be covered by any parts separated from any Machines.

23. If an Automatic Machine extends its parts directly from the starting zone to the Main Torch without touching the Beacon Tower Zone, will it be allowed?

A: The Automatic Machine must fit in the start zone sized 1000mm x 1000mm x 1500mm before starting, all start actions must be finished within 20 seconds, and the Machine can change its form freely only after it leaves the Start Zone, also the canisters of main torch can only be fed by the Automatic Machine **climbed on** the Beacon Tower but not the Machine stayed in the Start Zone.

24. What is the function of the Mark Plate mounted on the Main Torch Pole? Does it rotate together with the

Torch?

A: The Mark Plate is a facility. It can be used by your Automatic Machine to recognize the canister without distinguishing its color or extending sensor to the Torch. It rotates synchronously with the Torch.

Following questions and answers are provided in Feb. 5, 2005.

25 How does the Main Torch rotate?

A: The static friction moment and rotating inertia of the Main Torch used in the match will not exceed 0.5Nm and 0.4kgm², respectively.

26. Which kinds of material will be used to make the Fuel Disk and slope? How are they colored?

A: The Fuel Disk and slope are all made of wood. They are covered by non-shiny painting. The slope and edge of the Disk are yellow, and the center of the Disk is light gray. The color number for them will be determined later.

27. What do “change form” and “separate” mean?

A: These two words have special meaning in the Rule Book. The term “change form” means any size dimension or configuration changes, compared to those in the Start Zone, of an Automatic or Manual Machine itself, not including loaded Balls. The term “separate” means an Automatic Machine release another Automatic Machine and will not link to it.

28. Whether are the preloaded Fuel Balls included in the Machine size and weight limitations?

A: The preloaded Fuel Balls can't be regarded as a part of the Machine, thus, they are not included in the size or weight limitations.

29. Can a team's Automatic Machines stay inside the Start Zone and shoot the fuel ball?

A: It can stay there all time of the match and shoot the Fuel Balls, but it can't change its form and release other Automatic Machines, moreover, if it shoots the Balls into the Canisters of the Main Torch, the team will be disqualified.

30. How is the elasticity of the Fuel Balls controlled?

A: The elasticity of the Fuel Ball depends upon its inside pressure. The differential pressure between inside and outside should be zero. When you pump the Ball initially with a hand pump commonly used for basketballs, do not make its inside pressure too high. You can measure the pressure with a pressure gauge or make the ball drop freely from 1 meter high to a hard surface and watch its rebounding height. If the differential pressure between inside and outside exceeds zero or rebounding height exceeds 150mm, discharge slightly the inside air with a hollow needle inserted in the pump hole.