

ABU Robocon 2022 Delhi, India FAQ 3

Please read the rule book carefully before sending any questions. Please cooperate with us for smooth operation in a limited time.
[The FAQ# is in continuation to those appeared in FAQ2.]

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1. Terms and Conditions

FAQ #	Question	Answer
1.5-7	Are we allowed to make mechanism to balance to prevent from falling down? we are not altering the plate but placing a balancing mechanism?	Please see rulebook FAQ-1 and 2.
1.5-8	<p>(a) Are the vertical vibrations/ movements of "Ball on head" due to suspensions or actuators along with robot allowable as long as its top surface is above any part of the robot? Or the head must have a fixed height from ground?</p> <p>(b) What is the max height of the robot along with ball on head? 1250mm?</p>	Please see rulebook FAQ-1 and 2.
1.5-9	<p>(a) Based on the latest FAQ 1.5-2, it mentioned the plate and pipe will now be provided during the ABU Robocon 2022. We would like to check for local contest, shall the organiser produce the plate and pipe, or ABU will dedicate one specific supplier so that we could purchase the item from the supplier for uniformity. Same question to the game balls (seeker, hitter, and ball on head) and Lagori.</p> <p>(b) Additionally, we would like to check if the local contest organiser must provide the plate and pipe to the contestant as we consider this is part of the robot design. Initially, specified in rulebook, the participants are required to make the plate and pipe by themselves. We would like to know the reason why ABU would provide the item now for our justification.</p>	Kindly read rulebook 1.5, 1.13, 1.14
1.5-10	Are the weight of the BOH and the BOH plate included in the weight limit?	Please see rulebook FAQ-1 and 2. Reply individually.

1.5-11	Can Seeker 2 uses lights to shine on BOH with certain mechanism built on it's own pipe and plate (to distract opponent's aim)?	Any part of robot should not be above plate so not allowed.
1.5-12	The Local FAQ1 1.5-1 mentioned that "No relative motion between the robot and the plate is permissible." For "relative motion", is it indicates motion relative to the ground contact / at least half of contact/field of the robot?	Please read the rule book again.
1.5-13	Can the plate and pipe supporting the Ball on Head incline / move relative to the chassis in horizontal direction as long as the plate is 1200-1250 from the field surface?	Refer to FAQ1.5.1
1.5-14	Are we allowed to use suction to keep the Ball on Head steady? With the current speed and acceleration of current generation robots, the Ball on Head falls off very easily during acceleration/deceleration.	No
1.5-15	Are we allowed to use any means to keep the Ball on Head steady? If yes, what mechanism is allowed/not allowed?	Not allowed
1.17-10	Is there any material between the different size lagoris as well just like there is sunmica in between the lagori and the base?	No
1.17-11	Does the foam have any additional top layer or is it porous?	No top layer
1.17-12	Is it allowed to squeeze the lagori in any direction to some extent while lifting them from the floor?	Yes, it is allowed but lagori should not be damaged.
1.17-13	Will the lagori discs be covered with a layer of tape or some other covering or they will be kept on one another in direct contact?	They will be kept on one another in direct contact.

1.17-14	If the Lagori tears slightly when it is being held by a mechanism, is that classified as damaging a field object? Is that a violation?	Yes								
1.17-15	During Lagori Break – According to FAQ1 – 1.20-1, the referee will return the Lagori disc to the inside of the Lagori Area if the disc landed in opponent team's area. Please indicate the location of where the disc should be placed	It will be decided by referee according to the situation.								
1.17-16	During Seeker 2 Piling – Please confirm if the Lagori disc cannot be used once it goes out of the Lagori Area as a result of Hitter accidentally hits the disc in orbit toward the BOH, pipe, or plate. And referee will be responsible to decide whether the act is with intention.	Please refer to FAQ1 2.2.10								
1.20-3	Can Seeker R2 take more than one Lagori disc at once during the Lagori Piling phase?	Yes, it is allowed								
1.20-4	Can Seeker R2 pile external to square base and stack?.	No, it is not allowed								
1.20-5	Can Seeker R2 manipulate the disc/turning the disc /change resting surface of the disc before pile as some disc might landed on the ground with it's curved surface during Lagori break?	Yes								
1.20-6	<p>Please confirm the statements</p> <p>a. Seeker will score a Lagori disc point only when a) with it's base fully placed on top of the square base and b) another Lagori disc in the correct order.</p> <p>b. Any score will be award with the below order?</p> <table border="1" data-bbox="600 1013 1415 1241"> <tr> <td>Top</td> <td>Disc with diameter 200 mm / No score</td> </tr> <tr> <td></td> <td>Disc with diameter 275 mm / No score</td> </tr> <tr> <td></td> <td>Disc with diameter 425 mm / No score</td> </tr> <tr> <td></td> <td>Disc with diameter 425mm in contact with the disc with diameter 500mm / Score for both discs</td> </tr> </table> <p>Bottom Square base</p>	Top	Disc with diameter 200 mm / No score		Disc with diameter 275 mm / No score		Disc with diameter 425 mm / No score		Disc with diameter 425mm in contact with the disc with diameter 500mm / Score for both discs	<p>a) No score b) No score</p>
Top	Disc with diameter 200 mm / No score									
	Disc with diameter 275 mm / No score									
	Disc with diameter 425 mm / No score									
	Disc with diameter 425mm in contact with the disc with diameter 500mm / Score for both discs									

2.Game

2.1 Game Procedure

FAQ #	Question	Answer
2.1-14	<p>1. As mentioned in 2.1.16 rule, teams will be given a setting time of one minute, so are teams allowed to change batteries over bots OR add pressure into pneumatic reservoirs during this one minute?</p> <p>2. Is it compulsory for Hitter R2 to carry the ball on head?</p> <p>3. Is R2 allowed to extend in air after the match starts?</p>	Please see rulebook, FAQ-1 and 2. Reply individually.
2.1-15	What if Seeker 1 had not scored any points so there is nothing to pile? Shall we skip the break shot time or Seeker 2 must wonder around in Lagori area for 1 minute for opponent Hitter 1 to throw at?	The second round starts then
2.1-16	If both team in the same round do not score any points in break shot time, will both team be disqualified or how to handle in this the scenario?	Decided by referees and Judges based on situation There be no points for both teams.
2.2-11	Based on rulebook 2.2.17 if hitter R1 throws a hitter ball and hits the pile of lagori carried by the seeker R2 and the pile of lagori breaks, is the round also considered complete and seeker R2 gets points based on the number of broken lagori?	In this case, if the hitter throws the Hitter ball and hit the lagori carried by the Seeker R2 it will be a violation of the Hitter. The team member of the Seeker team can bring the Lagori disk to their robot according to the referees' instruction. Hitter must retry.
2.2-12	R1 robot do not have any particular tasks which needs navigation. Will it be okay if R1 does not have any chassis for navigation?	Yes
2.2-13	<p>Hitter 1 throwing at opponent Lagori disc</p> <p>1. According to rule book 2.2.17, Seeker team declares as winner if Hitter throws the balls to hit Lagori discs piled up on the base. Further to this, please advise if Seeker team declares as winner</p>	<p>a. Even a single disc is broken, then Seeker team will declare as winner.</p> <p>b. No score for piling the lagori.</p> <p>c. No, it is not allowed</p> <p>d. ...</p>

	<ul style="list-style-type: none"> a. irrespective of the number of Lagori discs being knocked off the stack? b. if the piled Lagori is not in the original order (not aligned with fig 4)? c. Further to the question above, please advise if Hitter is allowed to throw at the unpiled Lagori disc on ground. d. If allowed, how to handle the disc fall out of the Lagori area. Who and where to place the disc if needs to return? e. If not allowed, any penalty for the violation? 	<p>e. Ball will not be used again.</p>
<p>2.2-14</p>	<p>Hitter 1 shooting at Seeker 2 BOH</p> <ul style="list-style-type: none"> 1) When Hitter 1's ball hit Seeker 2's body and not BOH (regardless of intention), is that Hitter 1 will have compulsory 15 second restart penalty and Seeker 2 can continues from it's existing spot? 2) If the Hitter knocked the Lagori disc off Seeker 2's hand, how should the fallen piece of Lagori disc be treated? <ul style="list-style-type: none"> a. Replace the fallen disc manually by team member or referee? If this is the case, where to replace the fallen disc (e.g. Seeker 2 hand or ground inside the Lagori area)? b. Seeker 2 has to pick up itself ? c. If the Lagori disc fell and landed outside Lagori area, is that the disc cannot be reused according to FAQ1 – 1.20-1? 3) Can Seeker 2 use Lagori disc as a protection or shield to cover the BOH? <ul style="list-style-type: none"> a. If yes, is the Lagori disc considered as part of Seeker 2? What happens when Hitter 1 hits the Lagori disc in Seeker 2's hand in this case? b. If no, how and who to distinguish whether the act is intentionally for piling or for protection? 	<ul style="list-style-type: none"> 1) Please See 2.5.3 of the Rule Book 2) B) Correct Answer 3) Kindly see 3.4.2 and 1.5.3

2.2-15	<p>Seeker</p> <p>Any penalty if Seeker 1 hits and displaces the balls on the ball rack of the opponent's Team?</p> <p>a. What will happen to the displaced ball on the ball rack? In case the ball can reuse, should referee replace the ball back on the same spot?</p>	In such case, balls will be placed back on the same spot by the referee and the ball thrown by Seeker 1 cannot be used again.
2.2-16	Is hitter R1 allowed to extend in air?	yes (but it should fit in box used to transport)
2.2-17	Can seeker R1 allowed to pick up the hitter ball in the ball rack when seeker R2 piled the broken lagori?	Not allowed.
2.2-18	Based on faq-1 2.2-6 Is seeker R2 allowed to collecting multiple lagori at the same time and stored in the body robot before the lagori placed on top of the lagori base, or should the lagori arranged one by one in the lagori base?	Please refer to FAQ1 2.2.7.

3. Robots

FAQ #	Question	Answer
3-3	<p>1. Can we use laptop as an external device (not keeping it on the robot but we are connecting the robot and the laptop with wires)?</p> <p>2. Can we keep mobile devices on the robot? If yes, are there any specifications?</p> <p>3. Is hitter R1 allowed to extend in air?</p> <p>4. Where will we find coefficient of friction between polyurethane and other material?</p>	<p>1. Allowed without disturbing game.</p> <p>2. No</p> <p>3. Yes (but it should fit in box used to transport)</p> <p>4. Teams should experiment.</p>

3-4	Does R2 Hitter also require the Ball on Head to be mounted on it? Does it need to be between 1200mm-1250mm?	Please see the rulebook carefully
3-5	(a) The Rulebook 3.4.4 says that "Both for wireless or cable operation, the team members are not allowed to enter the Lagori Area and Ball Areas" so the question are can team members enter the red area and the blue area during the game?	Red team can enter Red Area and Blue team can enter Blue Area during the game.
3-6	As per rule book, team should build two robots - R1 & R2. Should R1 break the lagori disc (Round 01 - Seeker) and displace the Ball on Head (Round 02 - Hitter) ? Should R2 pile up the lagori (Round 01 - Seeker) and pick & pass Hitter Balls (Round 02 - Hitter) ? Should we design R1 or R2 with a single mechanism for 2 different tasks or multiple mechanisms?	Please see the rulebook carefully
3-7	In the Rulebook: "3.4.2 There is no height limit for both teams' R1. The height of both teams' R2 must always be lower than the top surface of the Ball on Head plate (1,200 mm-1,250 mm). " What is the maximum height R2 can go excluding the ball and is it okay if R2 covers a part of the ball?	Read the rulebook carefully.

General Category:

FAQ #	Question	Answer
GC-1	is it possible that one of our mechanisms exceeds the height 1m and blocks the view of Ball on head? because the seeker r2 needs to place pile upto 1.2m of height?	It's up to the team.
GC-2	Are teams allowed to use a laptop for image processing which is not mounted on the bot?	Not allowed.