



Robocon / FAQ

Q1: What is the surface of field made from, paint, sticker or vinyl?

Floor material is Plywood 18 mm thickness painted by plastic non shiny paint

Q2: After preloading the blocks are the dimensions allowed to exceed 1*1*1.5m?

No

Q3: Will 2 minutes given for setting the robots are per phase or per match?

Per Match

Q4: 1. The Automatic Robot including the preloaded blocks should not exceed 50kg?

All robots maximum weight <= 50 kg without the blocks

Q5: If I preload all blocks in the automatic robot and the stock zone could be empty, is that right?

Yes.

Q6: Can any part of the robot be in contact with the blocks after completely constructed the pyramid?

No

Q7: Can any part of the robot be in touch with the lower blocks when the layer above them is being built?

Yes

Q8: An automatic unit can be preloaded (before game start) with any arbitrary number of blocks. Can I put all blocks (8 blocks) in one auto-robot?

Yes

Q9: Can the automatic robots touch each other?

It is ok for the automatic robots of the same team to touch each other. When the automatic robot touches other team's automatic robot, follow referee

Q10: Can the preloaded blocks of both manual and automatic robots exceed the start zones and the space above it before the game starts?

At the very beginning of the game, Manual robots or Automatic robots including the preloaded blocks should not protrude from the start zones and th exceed 1000mm x 1000mm x 1500mm. However, this rule does not apply once the game starts.

Q11 :The pyramid has blocks with inbuilt holes. Can we use the holes to place the blocks in the place required?

Yes

Q12: Is there any specific rule for placement of block in pyramid? Can we hold the block even after placing them once?

In order to score points, the block must be placed in the correct position or within tolerance and no part of the robot is in contact with the placed bloc

Q13: Is there any gap or break given between all the three phases? For example, break between the time of building the Pyramids of Khufu and Khaf

No gap of time between phases

Q14: Will the building blocks in my country's Robocon contest be the same material of the official one?

Please check with the organizer of your local Robocon.

Q15: Is wireless radio control permitted?

No, wireless radio is not permitted to communicate between robots.

Q16: Are the main blocks had through holes?

See Figures uploaded October 2009

Q17: Are the fixed blocks having through holes?

This is a rule explanatory computer graphic. The actual field is the same with the Rulebook and the Figures on the website.

Q27: The manual robot cannot move on the Automatic Zone in time of building Khufu Pyramids due to wooden fence F and G but in the animation t

This is a rule explanatory computer graphic. The actual field is the same with the Rulebook and the Figures on the website.

Q28: I just want to know that how much tolerance will be provided in the robot dimensions. If our robot dimension is (1080 mm*1080 mm*1500 mm)

No tolerance (the maximum robot Dimensions are 1m*1m*1.5m)

Q29: Can you tell me clearly about rule 13.2? "The dimensions and weights of the Game Field, equipment and other facilities described in this rule be stated". Does $\pm 5\%$ tolerance include the size of manual and automatic robots or NOT?

No, see 8.5.2 and 8.6.3

Q30: Could the automatic and manual robot preloaded top block?

Yes

Q31: Does it necessarily have to go back to loading area, load the blocks and come back again for the second layer?

No, but it is up to you

Q32: Rule>> an automatic unit can be preloaded (before game start) with any arbitrary number of blocks. Does this mean that an automatic robot can

Yes, any number of blocks

Q33: Rule>> "If two Automatic Robots are used (For Khafraa construction), they should be started manually at or after the assigned start timing to be timing' meaning? Does this mean two robots could be started by programming?

Yes, they can start by programming

Q34: Is it possible for your committee to provide a orthographic drawing (side view) of the main blocks, as what is provided for the top golden block,

See new figures uploaded October 2009

Q35: Can I decide freely how to arrange the blocks in the manual stock zone?

Each team is free to prearrange his blocks in the manual and automatic stock zones.

Q36: Is it possible to stick a logo of a sponsor on the robot?

No

Q37: Is it possible to us any measuring tools or a pattern when setting up the blocks in the stock zone?

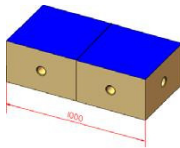
Yes

Q38: Do the same machines have to be used throughout the competition?

Yes. However, is it OK to replace a 'part' of the robot such as arm which has the same function but operates in a different direction. If the part has a

Q39: In the conditions when design and manufacture robots you say that: "At the beginning of the game, in the start zone, the dimensions of the Auto not exceed 1,000 mm (long) x 1,000 mm (wide) x 1,500 mm (height)". So if we place two blocks as shown in figure below, the wide is 1000 mm, do

No if it is within the allowed dimension 1m*1m*1.5m



Q40: In the dimension of the bottom plate of the golden block, what is the height of the truncated cone? (See figure).

60 mm



Q41: Is using hydraulics in robots permitted?

NO

No, the robot and the blocks held by the robot should not exceed the contest field

Q48 What if the automatic preload all the blocks?

Yes, for Khafraa pyramid, if within the allowed dimensions 1000mm*1000mmx1500 mm at the start zones (See Q8). To build Mankauraa Pyramid, Golden Top Block.

Q49 Is it allowed if the automatic robot put the last block of the first middle layer and first block of the next middle layer at the same time?

No

Q50 Is it permitted to reload (resetting) the block (which are fallen or were in wrong position on the robot) on an automatic robot when it retry?

When retry is granted, it is prohibited to pick up the fallen blocks and load them on the robot but it is permitted to adjust the blocks already loaded on

Q51 Is it necessary for the top block is separated from the arm of an automatic robot when it placed on the tray?

Yes, It will not achieve Robo-Pharaoh or finish a phase or gain points unless the robot goes completely out of touch with the Golden Top Block after

Q52 I want to ask if two automatic robots can communicate to each other using RF communication operating at frequencies around 2.4 GHz. If RF i

RF is not permitted (see Q15). Specify other types you are usi

Q53 Rule 8.2 states "The robots must not be divided into subunits". What do you consider as "Sub-Units"? What does it mean.explain?

There are a maximum of 3 Automatic Robots and one manual robot at the start of any game. Any part of these robots must not be separated. A. Sep robots are connected by any means, we don't call it separation.

Q54 Is placing the 1st lower layer and the 2nd lower layer at the same time for the Khafraa Pyramid using 2 auto robots a violation?

It is not allowed to place blocks in 2 layers at the same time.

Q55 If any block is placed on the upper layer before completing the lower layer, does a robot have to remove blocks on the upper layers?

Yes

Q56 In the case when an Automatic Robot cannot remove the misplaced blocks, the team can request a retry and when it is granted, team members c act does not apply to the 'Rule 9 Violation'?

There will be no deduction of points for violation but no points will be given for the removed blocks.

Q57 The rule 8.5.1 states "The automatic robots shall move automatically once it has been started within one phase". Could the Automatic Robots st: construct?

Yes

Q58 At rule 5.4, stated "An automatic unit can be preloaded (before game start) with any arbitrary number of blocks." If my team uses 3 automatic u automatic unit is allowed to be preloaded which means we need to choose one out of 3 automatic units used?

The 3 robots can be preloaded. Only Mankaura can not preloaded by any Top block (see modified Rule 5.3 & 5.4) .

Q59 Are the main block had through holes? Because I don't know where I can see Figures uploaded October 2009. Can you tell me about the main t

No holes for the fixed blocks and through holes for the building blocks.

No

Q67 In the stock zone, could a block exceed the stock zone not on the ground but in the air?

No, it is absolutely prohibited.

Q68 Are the robots to build Khafraa pyramid allowed to communicate by mean of Bluetooth or wifi?

No

Q69 Could I preload 2 Top Golden Blocks in the automatic unit?

Yes, except for Mankaura Pyramid

Q70 For the Mankuara pyramid, is it ok if both blocks (one block, golden top block) are preloaded before the match starts or automatic unit has to lo

No, Golden top blocks is not permitted to be preloaded for Mankaura Pyramid. The other blocks can be preloaded

Q71 If an automatic robot drops a block accidentally during the proceeding of a game (which is unintended), what are the possible actions that the pa

It is allowed to pick up the fallen blocks without Referee's permission if the robot is equipped with such function. If not, the team can pick up the fall

Q72 When a robot is in contact with a block or a Top Golden Block that is placed in the correct position or within tolerance, does that block earn sco

The block must be completely out of contact with the robot in order to earn score. In Figure below, there is no score for the block B which is directly

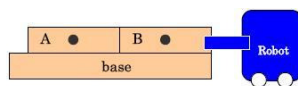


Fig Q72

Q73 When the 500mmx500mm surface of the block is not completely touching the base or the lower block, does that block earns score?

No (see Figure below), the block B earns scores while the block A doesn't.

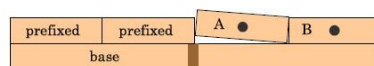


Fig. Q73

Q74 Are all the blocks must be placed in the right position (or within layer tolerance) in order to achieve 'Robo-Pharaoh'? For instance, if correctly in the 2 pyramids but their lower blocks collapsed simultaneously when the Top Golden Block is placed on the 3rd Pyramid?

Yes, it will achieve 'Robo-Pharaoh'. Once the layer is completed, the points will confirm. However, it is not allowed to intentionally move the position of blocks for practical reasons of collapse except the contact between robots and the finished layers. If there is any reasonable reason for such collapse, the referee

Q75 While placing blocks on the upper layer, the blocks in the once completed lower layer collapsed and the blocks are now shifted out of the tolerance ground that the lower layer has been completed?

Yes, you can. However, if the team intentionally moved the lower blocks so that they can place upper blocks easily after the completion of the layer,

Q76 If the block which has once been successfully placed in the correct position should fall or exceeded the tolerance will we lose score for that block

The judgment will be different depending on the circumstances. You will lose score when the block should fall or exceed the tolerance before completing the layer. Once the layer is completed, their points are confirmed. However, if the block falls or exceeds the tolerance after the layer is completed, the team will not lose score.

Q83 Is it allowed for a team member to manually activate one of the Automatic Robots that will build Khafraa Pyramid and then that robot to activate build Khafraa Pyramid to activate the robot that will build Mankauraa Pyramid via communication?

No

Q84 At the start of the game, is it OK to place blocks on the floor of the Start Zone instead of loading them on the robot? At this moment, the blocks only after the game started.

Yes

Q85 Are all the blocks must be either loaded on the robot or placed in the Stock Zone at the start? Or is it OK to remove blocks that will not be used

Yes

Q86 Would you explain the detailed procedure and conditions of blocks that can be used in the case of retry?

Answer 1: When retry, the team must bring back the robot to the Start Zone where the robot has started. The size of the robot including the loaded b

Answer 2: If the robot is loaded with blocks when the referee grants a retry, the team can retry with the preloaded blocks. It is allowed to adjust the p preloaded blocks in the Stock Zone.

Answer 3: When retry, the blocks that the robot hasn't loaded when the referee grants a retry, cannot be loaded on the robot. Such blocks must be re

Answer 4: It is allowed to collect blocks that had fallen on the field, and return them on the Stock Zone.

Answer 5: It is allowed to return the blocks that were placed on the uncompleted layers of the Pyramid, regardless of validity or invalidity of the score placed on the already completed layers.

Answer 6: It is allowed to adjust the position of the blocks which are placed in the Stock Zone during the retry.

Answer 7: Suppose the robot's operation comes to a halt due to malfunction while it is placing a block. If a retry is granted while the robot is in contact with the Stock Zone. (It is not allowed to leave the block on the Pyramid as the team will score points when the robot goes out of contact with the block.)

Q87: Can blocks be held in the space above the first layer while the first layer is being built?

Yes, if the blocks are not placed but only held in the space above without contact with the lower layers. However, When making your robots, please block positions.

Q88 : What is the 'timing' for the automatic robot to start building upper layer after the completion of the lower layer?

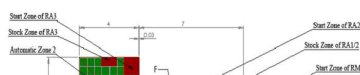
According to Rule 5.11, the referee will raise flag each time a layer is completed but when an automatic robot is building the pyramid, the automatic robot completed a layer, it will move away from it then without waiting for the referee's flag, the robot will start building the upper layer. The referee simultaneously completed, he will raise the flag. If uncompleted, the referee will indicate the team to do it again. (In the case when the robot itself cannot re-construct

Q89 : What happens if a robot places the block of the first layer of Mankauraa Pyramid in a wrong way and goes to the Stock Zone and picks up the

In this case, if the referee judged the block placed in the first layer as wrongly positioned, the robot has to return the Golden Top Block to the Stock Zone. In this case, the team will ask for a retry.

Q90 : How far the robot has to move away from all of the blocks in a layer after the completion of the layer?

"How far the robot moves away once the layer is completed does not matter. What matters is that after the completion of the layer, the robot must move away as graceful as possible. (see Figure 3 as example: Squares (■) are where referees stand and arrows are the direction of view of each referee.)"



There will be no point deduction as the act of placing blocks on the upper layer before completing lower layer does not apply to the Rule 9 Violation.

Q93: What is the maximum extension height of manual robot during the game?

There is no height limit for Manual Robot once the game starts.

Q94: With reference to FAQ Q38, if two opposite parts with similar function are used, how will the weight of the robot?

The total weight of all robots and other devices shall not exceed 50kg as per Rule 8.7.

Q95: With reference to FAQ Q45, is putting blocks on top of the blocks of the lower layer, but not in such a position that the upper blocks scores a point?
Yes

Q96

a- If the red team unintentionally dropped its block in the blue team's side, can red team remove the block? Can red team ask retry and use the same block?
The referee will remove the dropped block, not the red team. The red team cannot use the dropped block in the game even if the team requested for a retry.

b- If the red team unintentionally dropped its block in the blue team's side and the blue team should destroy the dropped block, will it lead to blue team's disqualification?
The blue team will neither violate the rules nor be disqualified.

Q97: Rule 8.6.3 states that the manual robots should be capable of stretching its arm within 2m in diameter circle as seen from above but did not state the exact range.

a- Does the delimited extend range for manual robots included the block within the 2m diameter circle?

No, the delimited extend range for manual robot 2m does not include the blocks (see Rule 8.6.3).

b- Is the height delimited by 2m as per in the Rulebook?

No, there is no height limit for a manual robot once the game starts.

Q98: In case of a block is placed on the upper layer before completing the lower layer, a robot have to remove blocks on the upper layers. Is it considered a violation?

No, as the act of placing blocks on the upper layer(s) before completing the lower layer(s) is not stated as an act of violation with two point deduction placed on the uncompleted layer(s).

Q99: For Mankaura Pyramid, is it allowed to pick up the top block from the stock zone before placing the lower block?

No

Q100: Is it allowed to connect the two building robots of Khafraa Pyramid via cable to make synchronization?

No, however it is ok if A ROBOT consists of more than 2 parts connected by cable or some sort. Refer to FAQ82.

Q101: Is super-regenerative transceiver allowed to be used between the Automatic Robots when building Khafraa?

According to Q15, the radio communication between robots is prohibited. In addition, Rule 13.6 prohibits the use of radio communication between teams.

Q102: In Q78, "Let Manual Robot that will build Khufu Pyramid hold automatic mode switch and use it as an Automatic Robot to build either Khafraa or Menkaure Pyramid." Is it allowed?

Yes without violation of the concerned rules. However, the number of robots will be counted as one Manual Robot and one Automatic Robot.

Once the layer is completed, the robot has to move away from the layer in order to place blocks on the next layer. For manual robot, if the robot is not in the Start Zone, it can place blocks on the next layer. The act in the question will not be taken as a violation with point deduction.

Every time a layer is completed, the robot has to move away from it. But if a robot accidentally placed a block on the upper layer following action must be done: 1- firstly, the robot has to remove the placed block. (It is OK to put it back on the robot) 2- Score once, and then it can start placing blocks on the upper layer. However, if the automatic robot failed to do so by itself, the team layer can be put back on the robot. As for the blocks placed in the lower layer that are in contact with the robot, they have to be referred to the answer 7 of Q86)

Q109: There is a doubt regarding automatic start & stock zone whether it has white lines or not?

There are no white lines in the Start Zones and in the Stock Zones.

Q110: There are two autonomous start zones for each team (RA1 & RA2 for red team and BA1 & BA2 for the blue team) for Khafraa pyramid. If we place the autonomous robot in RA1 for red team and BA1 for blue team only? Or is it up to us to select the start zone either RA1 or RA2 for red team?

It is up to you

Q111: Suppose if a team fails to complete setting of automatic robot(s) to be used in the 2nd phase in 2 minutes before the match, can we resume begun?

No. You can resume setting of the automatic robot(s) for 2nd phase only after the 2nd phase has begun. Also, if a team fails to complete setting before the match, they can resume setting of the robot only after the 3rd phase has begun.

Q112: Suppose if a team uses one (Robot A) of the two robots used in the 2nd phase in the 3rd phase. In this case, can we set Robot A for the 3rd phase?

No. The team has to bring Robot A to the Start Zone in the Automatic Zone 2 and set only after the 3rd phase has begun. Incidentally the

Comment #1 & Q113:

Comment #1:

Referring to Q42-2 'the robot has to go to the Stock Zone and picks up the Golden Top Blocks'. The understanding of the underlined sentence may differ from the question is:

Q113: The procedure for building 'Mankauraa Pyramid' is given under Q42 but the timing when the robot can pick up the Golden Top Block is not specified.

A further explanation shall be added to Q42-1 and Q42-2. First, the Automatic Robot must correctly place one block in the first layer of the Pyramid placed in the first layer, the robot can touch the Golden Top Block in the Stock Zone. Namely, the robot must not touch the Golden Top Block if it is not in the Stock Zone.

Comment # 2 & Q114:

Comment # 2:

Q55 says that if any block is placed on the upper layer before completing the lower layer, the robot has to remove blocks on the upper layer. However, when the robot is not in the Start Zone on the upper layers is not enough. The blocks on the lower layers must also be removed. The question is:

Q114: The Rule 5.11.1 says 'It is not permitted to build two layers in the same time'. If the robot placed two layers of blocks in the pyramid the lower layer?

No, you can't. In the first place, it is not permitted to build two layers in the same time. Therefore, when two layers of blocks are placed in the pyramid, the lower layer can score. When the robot placed two layers of blocks in the pyramid in the same time, the blocks must be removed from both upper and lower layers.

Comment # 3 & Q115:

Comment # 3:

Supplement to Q108

Q115: The Automatic Robot placed blocks in the lower layer correctly but before moving away from the blocks in the layer (namely before completing the lower layer, Q108 allows the Automatic Robot to reload the blocks that has been placed in the upper layer when 'Retry'). Now, what happens when the Automatic Robot goes out of contact with the placed block(s) but the layer is not completed because the blocks in the first layer are placed by the robot? Can the Automatic Robot reload those blocks when 'Retry'?

Yes, it can. Q108 and Q115 are the exceptional cases of 'Retry' (refer to Q86) and we allow Automatic Robot to reload the blocks that have been placed by the Automatic Robot.

You cannot place anything but blocks in the Stock Zone during the game.

Q118: Under Q37, it allows the team to use measuring tools or patterns when setting up blocks in the Stock Zone. Can we leave those tools in t

No, you can't. You cannot leave anything but Blocks or Golden Top Blocks in the Stock Zone during the game. If you adjust block position usi removed from the Stock Zone.

Q119: Rule 5.11.1 and Q114 state that 'it is not permitted to build two layers in the same time'. Will you clarify when it w pictures below?

Example 1) When the block below is completely in contact with the block above.



Example 2) When the block below and the block above are in contact by a point or by an edge



Both example 1 and 2 will be judged that blocks are 'built two layers in the same time'. In this case, you have to re-build blo

