



# Eurobot<sup>open</sup> 2006 "Funny Golf"



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## Funny Golf

### FAQ 1

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### 1. Erratum

Any team taking part in Eurobot (either selected through national competitions, or benefiting from a direct access to the competition) must keep an empty space (6x6 cm) on their robot to place the logo of the sponsors.

#### 1.1. Question 1 :

What is the totems' exact position? How far away are they placed from the edge of the pitch?

#### Answer 1:

There are indeed some missing dimensions on the drawing provided with the original rules. The correct dimensions are as follows:

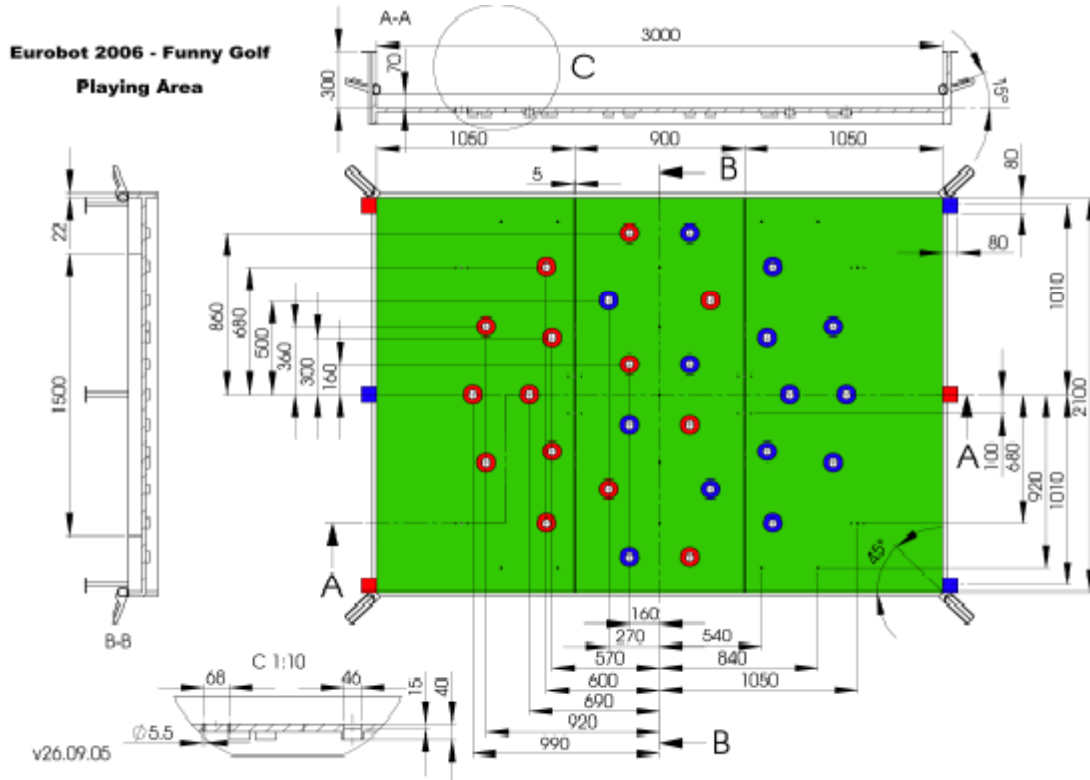




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### 1.2. Question 2 :

In the original rules, it is said in chapter 5.1 that "All dimensions are given in millimetres". Aren't they actually given in centimetres? (30 for the height of the robot, 4 for the balls...).

#### Answer 2 :

Indeed, the dimensions provided in the figure in paragraph 5.1, page 14, are expressed in centimetres, not millimetres.

### 1.3. Question 3 :

Chapter 7.1 of the homologations rules says: "...is able to win a match (can put at least one white ball in a hole of its own colour within 90 seconds)". Shouldn't it say "put more white balls in holes of its own colour than in holes of the opponent's colour"?

#### Answer 3 :

The original sentence is indeed incorrect. The robot plays as if in a real match, but without an opponent. It must therefore place more balls in holes of its own colour than in those of the opponent's.

### 1.4. Question 4 :

Is the external diameter of the PVC pipes used to make the totems 52 mm?

#### Answer 4 :

The external diameter of the PVC pipes is 50mm, not 52.





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## 2. The holes

### 2.1. Question 5 :

Could it be possible to better define the bottom of the holes?

#### Answer 5 :

The holes will be drilled through the surface of the pitch. The walls of the holes will be solid (for instance made out of plywood). The bottom of the holes will be solid (for instance made out of plywood), and small holes will be pierced through them to let the air through.

## 3. Totems and balls ejectors.

### 3.1. Question 6 :

How long must a robot be in contact with a totem for the ejector to release it balls?

#### Answer 6 :

Ball are guaranteed to be ejected only after a contact of at least 0.5 seconds.

### 3.2. Question 7 :

Must the contact with the totem be maintained for a longer period of time in order to eject all the balls out of the ejector?

#### Answer 7 :

No. A single contact will eject all the balls out of a particular ejector.

### 3.3. Question 8 :

Is there a reflective strip on the totems so that robots can better detect them?

#### Answer 8 :

No, there is no reflective strip on the totems.

### 3.4. Question 9 :

What exactly are the rings on the totems made of?

#### Answer 9 :

Each ring will be made of a metallic tape, or a metallic strapping.

### 3.5. Question 10 :

What is the thickness of these 2 metallic rings?

#### Answer 10 :

The thickness of the two metallic rings is negligible.

### 3.6. Question 11 :

Can we get the electronic circuit diagram for the totems?

#### Answer 11 :

The refereeing committee cannot give out any electronic circuit diagram for the totems, because they could vary from one country to another.





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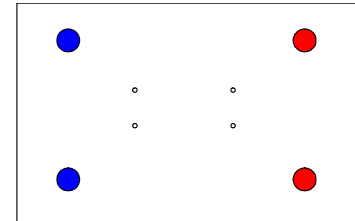
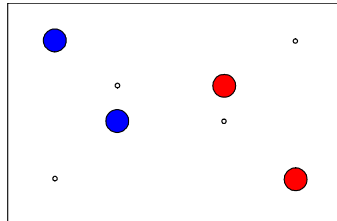
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### 3.7. Question 12 :

Is the blue or red colour displayed on the top of the totems (as the drawing on the first page suggests), or only on top of the base (as detailed in the explanations)?

#### Answer 12 :

The blue or red colour is displayed **both on top of the totems and on top of the bases.**

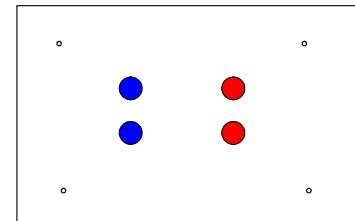
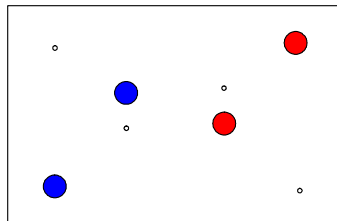


### 3.8. Question 13 :

In paragraph 8.2 of the original rules, it is said that totems and white balls are positioned randomly on the table. Can there be two totems on each black line, or two totems in each camp and none on the black lines?

#### Answer 13 :

These four figures show all the possible random positions for the totems and white balls. **Yes**, there can be two totems on each black line.



## 4. Beacons

### 4.1. Question 14 :

Could you amend the rule stating that the 3<sup>rd</sup> beacon cannot be connected?

#### Answer 14 :

Even though we understand that connecting the 3<sup>rd</sup> beacon would be technically beneficial, it cannot be authorised due to obvious logistical and organisational constraints around the scene.

### 4.2. Question 15 :

About the on-board beacon mount (§4.10): "the beacon mount must be easy to take down and put back on, so as to be used only when the opponent team needs it." Is it compulsory for this mount to be removable?

#### Answer 15 :

The presence of the mount is compulsory only when the opponent team needs it (i.e. if they do possess a working on-board beacon). Consequently:

- the mount can be permanently present
- it can be designed to be quickly taken down and put back on.

## 5. The balls

### 5.1. Question 16 :

Are the ball position markers painted on the table, or slightly drilled in order to ease the positioning of the balls by the referees ?

#### Answer 16 :

The positions of both the white and black balls will be marked on the table by sticky eyelets (the same as those usually used in binders), painted the same colour as the table.





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## 6. Strategies

### 6.1. Question 17 :

Is it authorised to guide the balls towards the corners of the table?

#### Answer 17 :

If it is done in order to pick them up, it is permitted. If it is done to prevent the opponent from using them, it will be considered non fair-play and penalised.

### 6.2. Question 18 :

After the game times out, can there still be some balls left inside the robot?

#### Answer 18 :

Yes. It is not compulsory for the robots to expel all the balls before the end of the match. However, the balls must be returned to the referee after the game sheet has been validated.

### 6.3. Question 19 :

If, at the end of the match there are balls inside the robot, does it gives negative points ?

#### Answer 19 :

No, There are no negative points.

### 6.4. Question 20 :

What happens at the end of the statutory time if a robot is above a hole ?

#### Answer 20 :

A referee lifts up carefully the robot to check if there is a white ball in the hole. If it's the case, this ball will be counted.

(A ball falling down in the hole during this manipulation won't be considered valid.)

### 6.5. Question 21 :

Is it acceptable to eject balls outside of the pitch ?

#### Answer 22 :

No, It is not fair-play and will be penalised.

### 6.6. Question 22 :

What happens if a robot has a tendency to crush the balls during the matches ?

#### Answer 22 :

If it happens, we will consider that the robot damages the playing elements. Then, a penalty will be applied, and the robot will have to pass through the homologation process again to be allowed to carry on with the competition.

### 6.7. Question 23 :

What happens if after 1min and 30sec the robots stops as required, but a ball is still rolling and falls in a hole ?

#### Answer 23 :

This ball won't give any point. (Rules §6.4.1).





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## 6.8. Question 24 :

Is it allowed to design a device removing the balls from the opponent's holes?

### Answer 24 :

Yes, It's an interesting strategy. All the balls can be removed from the holes.

## 6.9. Question 25 :

Will the balls falling accidentally in the holes after the totem activation be counted?

### Answer 25:

Yes. We remind that all the balls will be counted at the end of the mandatory time.

## 6.10. Question 26 :

Is it possible to start the mother board of the robot before the beginning of the match while leaving the power part of the robot disabled ?

### Answer 26 :

The robot can be powered on before the setting-up of the playing elements procedure takes place. But, it should not move or deploy before the starting device is triggered. Here is a reminder of the starting procedure:

- The team positions its robot, undeployed, inside the starting area. This must be done in such a way that the robot is in contact with the color painted edge of the playing ground (red or green depending on the colour held by the robot).
- (...)
- The teams have 3 minutes to position their robots on their starting area...
- Once the robot is positionned, no action can be made with the robot, and no external communication is authorized.
- When the 2 teams are ready, the referee draws the position of the 2 totems and installs them on the table. Then, they put the 2 white balls on the remaining positions. After that, they draw the position for the 2 black balls, put them on the table and put 2 more symmetrically (central symmetry). During this procedure, the teams cannot touch the robots anymore.
- At the start signal given by the referee, the robots are started by a member of each team and the robots act on their own.

## 6.11. Question 27 :

Between 2 consecutive matches, can we establish an electrical communication with the robot during the 3 minutes.?

### Answer 27 :

Yes, but all communication means will have to be disabled during the match.

## 7. Dimensions of the robot et the balls

### 7.1. Question 28 :

Is it authorized to build a robot 30cm high having a device going into the holes. The total height of the robot being, in this case, higher than 30cm ?

### Answer 28 :

The height limit of 30cm is checked relatively to the playground level.

Deploying elements in a hole is authorized within the dimensions of the holes (46mm diameter, 40mm deep)





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## 7.2. Question 29 :

What is the exact rule used to count the stored balls?

### Answer 29 :

A ball is considered as embedded in the robot if :

- It is physically linked with a part of the robot (Eg : adhesive tape, suction cup..)
- It is restrained by the robot, preventing it from rolling freely on the table, regarding balls contained inside an angle of 90 degrees.
- In general, the balls that cannot be reached by the opposing robot will be counted.

## 7.3. Question 30 :

During homologation, is the ball holding capacity of the robot solely based on physical criterion or does it take in account the counting and sorting capabilities of the robot ?

### Answer 30 :

It's the physical holding capacity of the robot which is considered. During the homologation, the collecting and storing devices of the robot are activated. The ball ejection site(s) is blocked. 15 balls are presented, one by one to the robot. The 15<sup>th</sup> ball could be refused by the own means of the robot.

The counting and sorting capabilities of the robot performed in an electronic and software way are not taken into consideration.





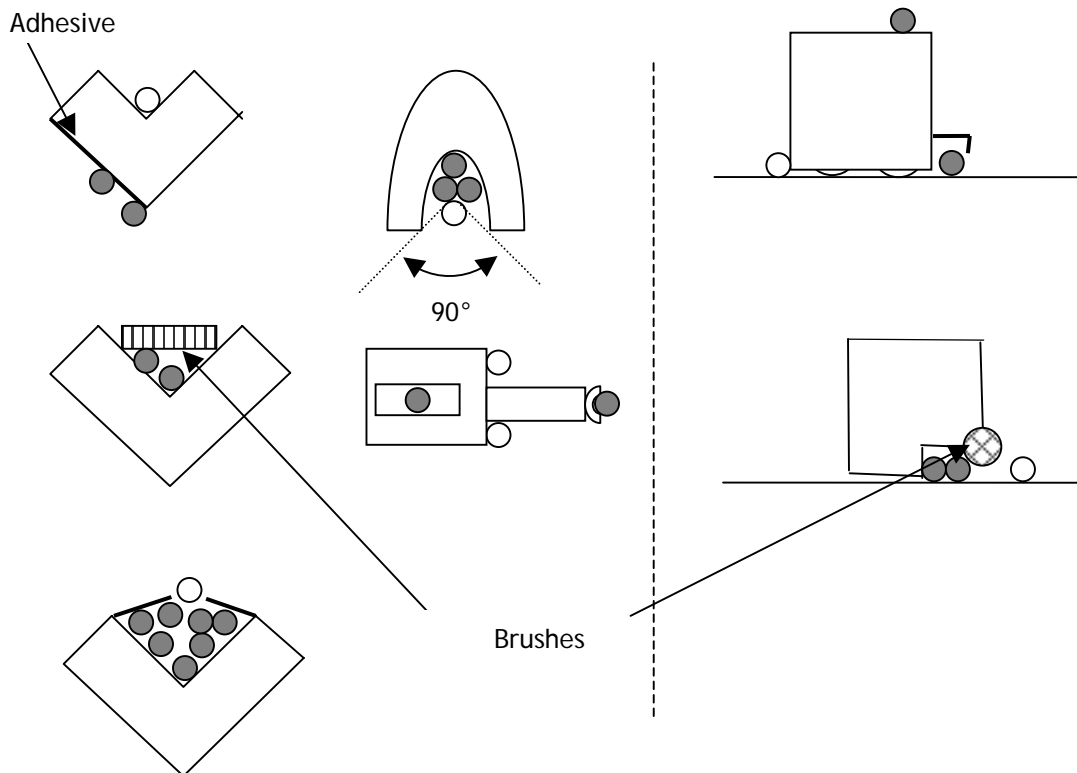
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Some examples of application of these rules

- : Ball counted as stored
- : Ball not counted



## 8. Black balls

### 8.1. Question 31 :

How will the draw take place for the position of the black balls ?

#### Answer 31 :

The draw will always be fair. The possible cases are described in the following file :

[http://www.robot-ch.org/2006/Eurobot\\_CardsPlay2006recto\\_v03.pdf](http://www.robot-ch.org/2006/Eurobot_CardsPlay2006recto_v03.pdf)

## 9. Divers

### 9.1. Question 32 :

Is it authorized to blow the balls to move them from a distance?

#### Answer 32 :





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To blow the balls to make them unreachable for the opponent will be considered ANTIJEU. Then, penalties will be applied.

## 9.2. Question 33 :

Is it possible to make the table shake ?

**Answer 33 : No.**

## 9.3. Question 34 :

In its starting position, should all the robot be touching the painted edge ?

**Answer 34 :**

No, the robot can touch the color painted edge on a single point. However, the robot should not be over the 30cm square located in front of the areas painted in white. This is meant to prevent the ejection of the balls to be disturbed.

