



Eurobot<sup>open</sup> 2007

## Robot Recycling Rally



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Official Rules 2007

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# Robot Recycling Rally FAQ 3

## Introduction

This FAQ regroup some advices from the refereeing committee and some precisions on the playing field for Eurobot final 2007.

## Notes

### 1. Obstacle Avoidance System

Your obstacle avoidance system will be tested during homologation, as described in the rules.

The rules require you to “react to the obstacle”. During the National competitions, we have observed that many robots interpret this to mean: “Stop until the way is clear.”

If your robot employs this strategy, please consider what will happen when it meets another robot employing the same strategy! (Hint: Answer: Nothing will happen, both robots will stop, the match is effectively over - ☹ )

So, please program your robot to do something other than just stop if it detects an obstacle. For example, your robot could:

- 1.Back away
- 2.Turn around, go the other way

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### 3. Head either left or right around the obstacle

Note that this is a recommendation based on observed matches, not a rule. Your robot will not be penalized for being boring and just stopping.

## 2. Homologation Program

During the national competitions it was observed that many robots had difficulty with the homologation.

For the homologation it is recommended that you design special “homologation software” for your robot. Your robot does not have to homologate with the full program used during competition matches. You can write a simpler, specific homologation program.

Also, we recommend having separate programs for the point scoring and the obstacle avoidance parts of the homologation.

To speed up the homologation process, all teams are required to perform the physical homologation of their robots within 2h of arrival at La Ferté Bernard. When you arrive, sign in, get your pit and accommodation, unpack your robot at the pit, and then get a referee to approve your robot.

## 3. Strategy: Keep it simple!

Employ simple strategies! Eurobot is less than 2 weeks away. If your super-complex robot involving computer vision, q-learning and a six degree of freedom waste processing system is not yet working, perhaps it is time to simplify your design!

In many national competitions the simpler robots proved more reliable.

## 4. Blowing the Waste

The rules do not prohibit blowing the waste across the table. Blowing items of waste individually is certainly allowed. However, blowing all the waste (randomly) across the table is not the idea of the competition, and depending on what happens, your robot could even be penalized! This will be the case if, for example, waste is blown off the table, waste is blown into the incorrect opponent bin, or the waste is blown in such a fashion that the opponent robot cannot access it (blocking). Play fair, give the opponent his chance!

## 5. Technical poster

Chapter 4.8 of the rules.

The poster shall be supplied in PDF Format. The chosen resolution of the PDF must guarantee all texts to remain readable. The file size of the PDF should remain below 10MB, on a key USB (USB flash drives). A computer will be at the pre-approvals. The referees will ask you your poster.

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#### 6. Playing field and playing element of the French Cup and Eurobot final

The weight of the batteries is between 130g and 150g.

The basket is a hollow cylinder, 200mm in diameter and 30mm tall, with 10mm walls and open at the top. The interior depth is 25mm.



For the Eurobot final and the French Cup, the cans are silk-screen printed entirely in yellow and have a vertical line of 5mm from top to bottom without colour (metallic).



The bin with the net :



The net will tight.

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