

Bear Rescue

Task of the robot is to find a lost bear and bring it back home as fast as possible.

1. Contest description

After being started, the robot has to travel across the playing field, find the bear and bring it back to the starting place. Robots are ranked based on the time they spend for the rescue task.

Before the start, the participants prepare the robot so that it touches the back wall of the starting area. Since then, no intervention is allowed. After the preparation, the referee places the bear somewhere in the target area. The participant starts the robot on a referee's signal. The time is measured from this signal to the moment when the robot returns and both the robot and the bear fully cross the marked line. If this time exceeds 5 minutes, the referee will terminate the race.

The organizers may allow repeating races or rounds; only the best time of all attempts of a robot will be used for ranking in this first part of the contest. In the finale part, the races will be held on a knock-out basis.

2. Robot

The robot must not be dangerous or excessively annoying.

The robot is autonomous. Throughout the race (including the start) no external connection is allowed. Since the robot is prepared for start, it must not be touched or interfered with in any way except starting until the referee allows so.

On its top side, an emergency switch must be located. By pressing it all actuation must be switched off. The switch must be big enough and well distinct so that it can be easily recognized. It must be also easy to be reached and intuitively used. A 10x7 cm space for marking must be reserved on the robot's top side.

At start time, the robot must fit inside the starting area; otherwise, its size is not limited.

Standard Category: The robot may be constructed from arbitrarily chosen components.

Construction Kits Category: The robot may be built fully using only a pre-approved Construction Kit. For details, see Construction Kits specific rules.

3. Playing field

Playing field ground is white. The playing field is bordered and contains inner walls forming a "meander". Both the border and the inner walls are approx. 10 cm high. The robot must not pass or "lean" over the walls but it may "look" over them. The robot starts from the back side and the bear is lost in the front side of the playing field (see the picture; the hatching and the blue lines are not drawn on the playing field and serve here only for explanation).

4. The bear

The bear is a stuffed teddy bear. It is not smaller than 10 cm and not bigger than 30 cm. It is sufficiently contrast in comparison to the ground. It is not live, not moving and its weight is appropriate.

