



ASOCIACIÓN AMERICANA DE  
**ROBÓTICA**  
Y TECNOLOGÍA A. C.



## **“Rescue Race”**

**Participating team:** must be conformed by 3 members and a coach over 18 years.

**Allowed material:** Scribbler S2 or S4, computer and Scribbler Robot software.

**Challenge:** The team must program its Scribbler robot to undergo a rescue race in which different obstacles will be presented. The robot has to travel the three levels of the track while overcoming the obstacles. The robot has to reach the finishing block as fast as possible, earning the highest score possible.

The teams can show their programming abilities in this fascinating challenge!

**Court:** The official measures are: 2.30 meters length x 1.14 meters width

### **Rules:**

- Each team will be allowed practice time, which will be specified by the jury.
- Each team will be granted 2 rounds to participate, each with a maximum of 7 minutes.
  - The winning team will be the one with the highest score, adding both rounds. In case of a tie, the travel time will be considered as a tiebreaker.
  - The jury's decisions are unquestionable.
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**Note:** The qualities of the Scribbler robot, both S2 and S3, are the same regarding to the functions that are used for the present challenge.





### **Restrictions**

- It isn't allowed to measure the track.
- The team members can't enter the track at any time to manipulate the robot's trajectory, except if the robot is at any risk (falls).

### **Scoring**

#### **Level 1**

4 points for going through the lower tunnel  
6 points for following the black line

#### **Level 2**

8 points for going through the leds tunnel  
6 points for going through the ramp number 1  
6 points for going through the ramp number 2

#### **Level 3**

8 points for entering the Level 3  
20 points for finding the finishing block before the time limit. The robot has to stop in front of the finish block, turn on the leds and emit a sound, as

#### **Bonus**

5 bonus points for a perfect trajectory, which means, the robot didn't touch the walls or any other elements in the court during its journey.

### **Penalty points and special situations**

If a robot gets lost in any level, the team can choose between the following actions:

- Go back to the beginning of the level, starting from zero points, and try to recover as many points as possible.
- Start at the next level, assuming that the points earned in the past level will be lost.





- Once in the third level, the Scribbler robot must locate the finish block, which has to be placed on the box with the number that was chosen at the beginning of the challenge.

