

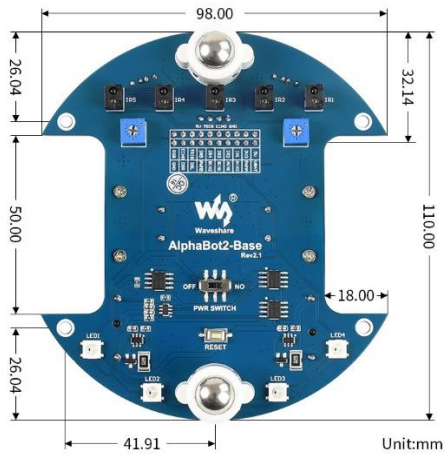
Micromouse robot competition

RULES BOOK

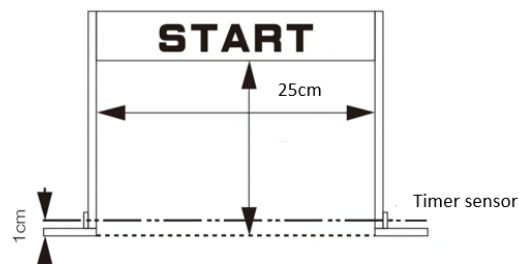
Ambassador Team
CONTINENTAL AUTOMOTIVE SIBIU

1. Robot rules

- The micro mouse must be build using all components from the given kit and an optional 3D body design must be ensured during complete competition
- The micro mouse must be free-standing and self-contained. Energy sources using combustion are not permitted
- Best exterior design will be awarded



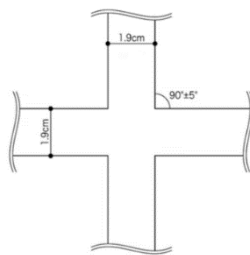
- The micro mouse must not have components added, removed, replaced, or changed by the operator during the competition. However, minor repairs and adjustments are acceptable with the approval of the judges. It should be noted that for competitions deemed particularly necessary, replacement of batteries with the same specifications may be permitted
- The micro mouse must not leave any part of it in the maze
- The micro mouse must not jump over the lines and use any sensing method likely to cause damage to the maze, no deviation from the maze line is accepted
- The size of the micro mouse must always be able to fit into a 25 cm square when placed on the floor surface. Maximum height 40 cm.



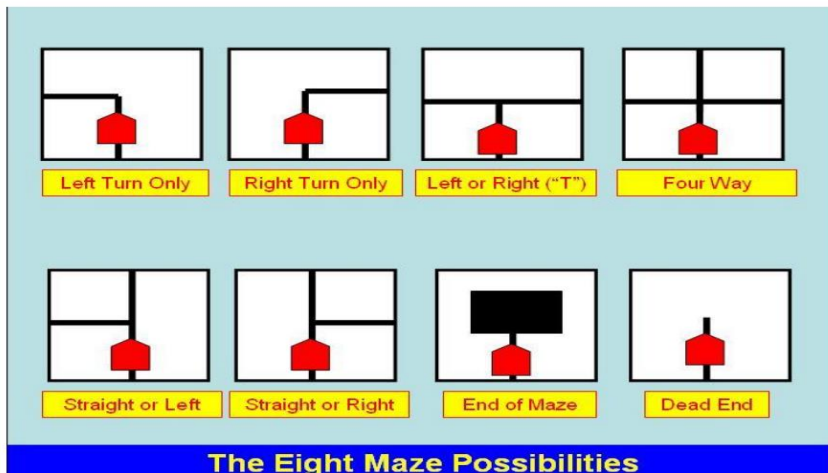
- It is not permitted to load programs and change ROMs during contest. In addition, it is not permitted during the contest to connect the micro mouse to a development device or console box independent of the main unit to give instructions on program execution.

2. Maze rules

- The running surface of the maze shall be painted with white matt paint or varnish
- The running surface of the course is white, and the course is a circular course indicated by black lines with a width of 1.9 cm. The total length of the line shall be 60m or less. A line consists of a combination of straight lines and 90 degrees turns. When the lines cross the angle shall be 90 ± 5 degrees, 10cm before and after the point where the lines intersect, the lines shall be straight.



- The goal area is a rectangular space 10x10 cm. Mazes are manufactured with common sense precision, so some dimensional errors may occur. In addition, gaps, or steps of up to 1 mm may occur on the wall and floor. In addition, there may be color variations, discolorations, stains alike present on the floor.
- The maze possibilities are described in bellow figure:



3. Competition rules

- The shortest time taken for the micro mouse to travel from the start point to the end point is taken as the maze run time of the micromouse.
- Checkpoints(milestones) should be taken into consideration for deciding the final result of the competition.
- The operator shall not enter information about the maze into the micro mouse after the maze has been revealed. In addition, the operator shall not manually correct or partially erase information about the maze during the competition.
- The maze run always begins from the starting line and ends when returning to the starting square, stopping for 5 seconds or more, or manual recovery of the micro mouse is authorized.
- If the micro mouse returns to the starting line and restarts automatically, it must stop for at least 5 seconds at the starting line.
- The operator shall not touch the running micro mouse unless instructed or authorized to do so by the judges. The competition judge will permit a manual recovery if the micro mouse has clearly malfunctioned or is unable to continue running. In addition, a request for recovery under any other circumstances may be accepted on the condition that all memories concerning the maze be erased.
- The micro mouse has a duration of 15 minutes, during which they can run up to 5 times.
- It is recognized that the micro mouse has passed through the timing gate when all parts of the micro mouse within 1 cm of the floor surface have entered the end goal area. However, the measurement of the run time is made when the micomouse lives the sensor at the start point and then the sensor at the end point senses the same mouse.
- The lighting, temperature and humidity for the contest shall be the normal indoor environment. No request for lighting adjustment will be accepted, use of flashlights for photography is not permitted during active competition. Calibration of the line tracking sensors before the run are allowed.
- The judges may ask the operator for an explanation of the micro mouse if deemed necessary. At the discretion of the judges, contestants may be asked to stop running, disqualified or other necessary measures taken.
- The content and award criteria of the competition will be determined and presented to all participants before competition start.

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- Additionally checkpoints on the track will be placed to judge partial solving of the maze.
- When the micro mouse has completed a run and has come to rest for at least 5 seconds, it may be taken out of the maze for minor maintenance such as the cleaning of tires.
- Although it is permitted to remove dust and dirt attached to the tires with adhesive tape during the competition, solvents etc. should not be used.
- The micro mouse can continue searching the maze further after reaching the end point in each run. In this case, the time from the start point to the end point is recorded only the countdown for 15 minutes will continue.
- If the micro mouse restarts within 5 seconds after returning to the starting line, it is considered that the next run has started, but the timekeeping record of that run is invalid.
- For adjustment, etc., handlers must not place the micro mouse in any area other than the start line of the maze.
- The timing sensors are transmission type photoelectric sensor The optical axis is horizontal and 1 cm above the floor. Timing sensors are placed at the boundary of the start square and the boundary of any entrances to the goal area.
- If the micro mouse is removed from the start line after having been placed there to start a run, then that run will be considered finished.
- The judges reserve the right to make changes to any of the above in the interest of fair play and sportsmanship, and to ensure that all competitors have an enjoyable competition. In the event of ambiguity, the judges' interpretation of any clauses of the rules shall prevail.