

Garden Gnomes have rearranged the path in your garden and you get lost every time you go out there! You must find the route to your shed to continue your Raspberry Pi adventures.

To complete the maze as fast as possible using one of the methods available.

Remote control or Autonomous.

Time Limit:
5 minutes.

1500MM

THE SHED
(FINISH POSITION)

650MM

300MM

200MM X 400MM

200MM

300MM

300MM

300MM

300MM

200MM X 400MM

650MM

200MM

250MM

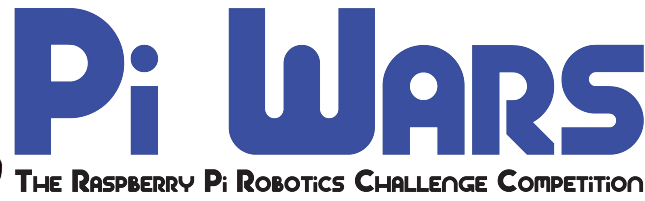
300MM

UP THE GARDEN PATH

The red lines are to indicate the end of the six elements of the course (see the notes on points for how these are used). Anything in red should not be printed – a different version will be available for printing.

A successful run requires staying over the path and not getting muddy feet. (i.e. your robot must keep to the line of the maze without wandering off!)

You must finish inside the “Shed” (marked on the course diagram). Timing of your run will finish when any part of your robot is inside the Shed.

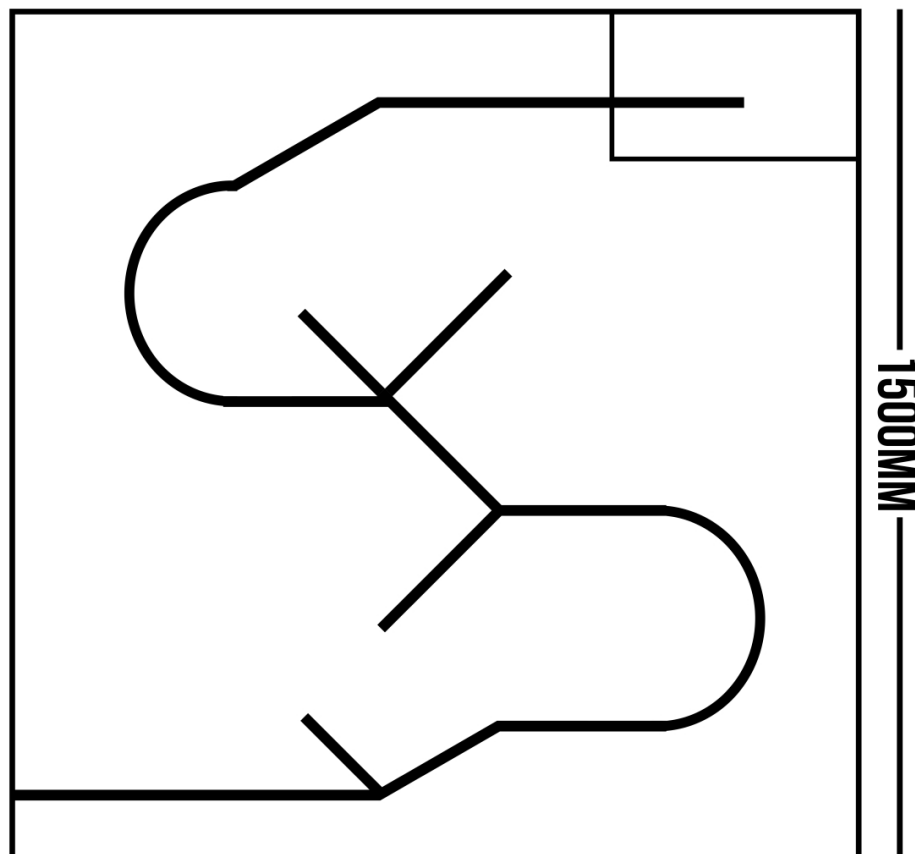


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- 1500MM



UP THE GARDEN PATH

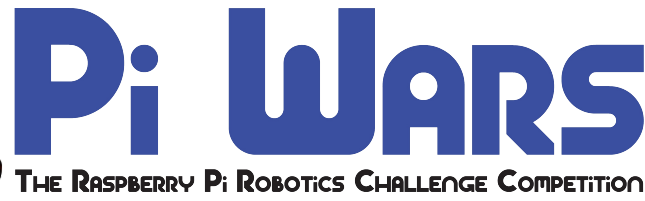
There are multiple ways of completing the course. You must **choose only one** method for your runs. These are in order of difficulty:

You can use only a remote control to manually navigate the maze.

You can use line following sensors to follow the course and autonomously navigate the correct path. You may optionally use audio commands to direct the robot should it need assistance at any point.

You can use a camera attached to the core Raspberry Pi to follow the line using image recognition. You may optionally use audio commands to direct the robot should it need assistance at any point.

You can issue purely audio commands such that your robot listens and behaves accordingly. We suggest these instructions should be limited to simple commands such as “forward”, “back”, “left”, “right”, “stop” etc.

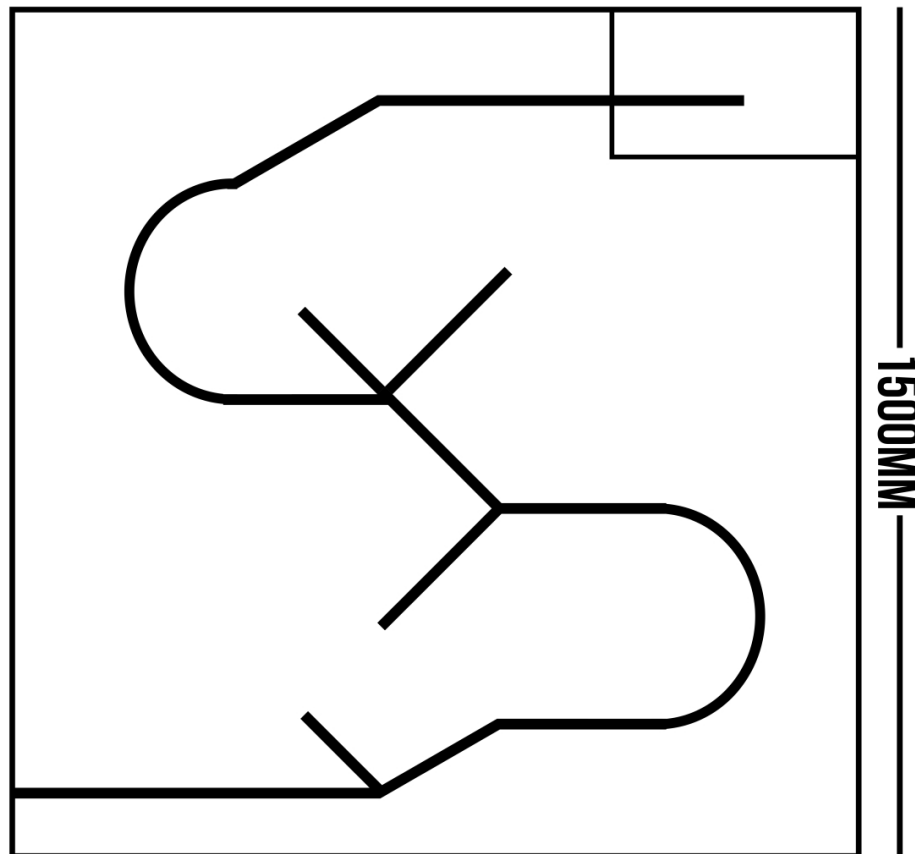


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- 1500MM



UP THE GARDEN PATH

All details and scorings are to be confirmed. **These scores have not been balanced against the other challenges yet, but expect the structure to be broadly as follows.**

Competitors will be grouped into the method they choose to complete the course and then ranked according to the **single shortest time** taken to drive the course across all their attempts. The robot with the shortest time in their group will take first place.

Points will be awarded to the top ranked robots in each group according to the Formula Scoring System.



<https://piwars.org/2021-vpw/challenges/up-the-garden-path/>



Aim of the Challenge:

Control Method:

Time Limit:
5 minutes.

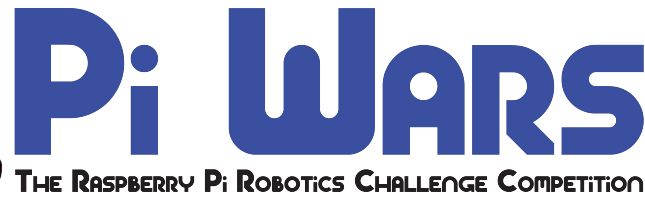
Additional Points

Using audio commands in combination with either line following or camera/image recognition will earn you an additional 400 points. **Please note:** You must issue at least three audio commands to be eligible for the additional points.



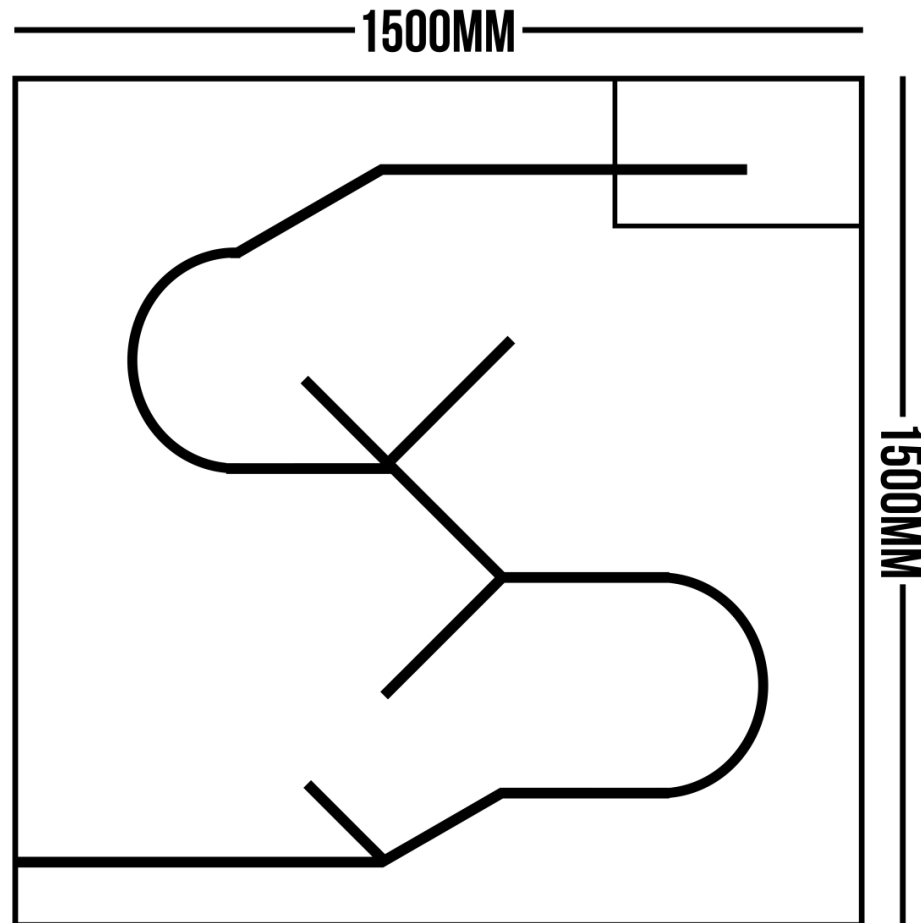
1500MM

UP THE GARDEN PATH



Time Limit:
5 minutes.

Notes:



UP THE GARDEN PATH