"JOURNEY" CONTEST RULES Elementary Category
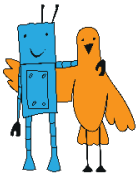
Version 1.0 dated July 20, 2017.

Contents

1. General provisions

1.1. Task description

The robot participating in Journey competitions for «junior» category should perform Line Follower with Fixed Obstacle, Labyrinth, Line Follower with Slide and Kegelring tasks in sequence within one race.

Duration of the race is three minutes.
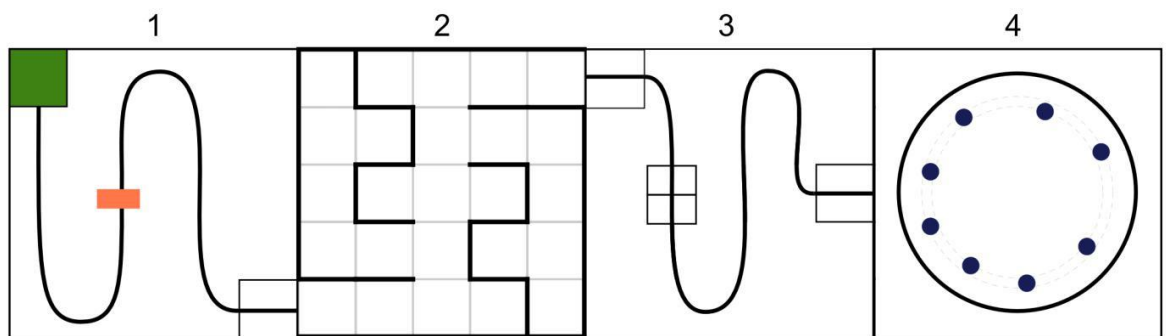
See Fig. 1 for general layout of the Journey field:

Fig. 1. General layout for elementary category

1.2. Procedure of competition

Each section has its own starting and finish areas. Table 1 and Figure 2 show the starting and finish areas of the junior category sections.

Table 1. The starting and finish areas

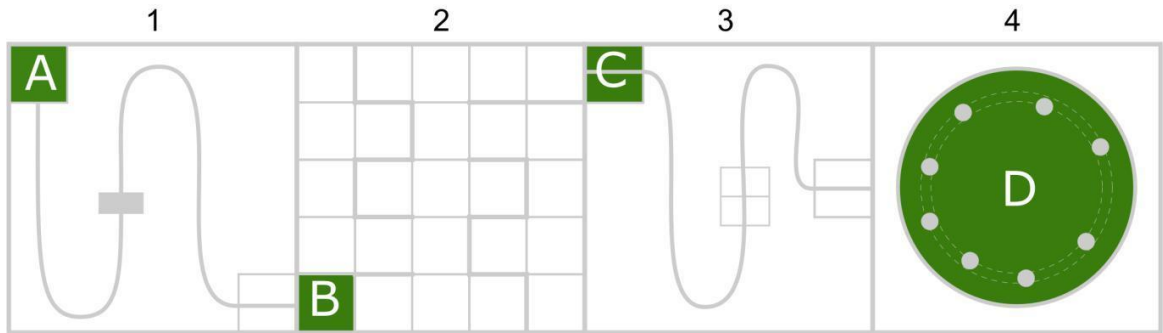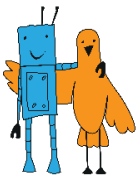| №	Section	Starting Area	Finish Area
1.	Line Follower	A	B
2.	Labyrinth	B	C
3.	Line Follower	C	D
4.	Kegelring	D	D

Fig. 3. The starting and finish areas at the elementary category sections

The task is considered to be fully completed if the robot passes all the sections, completes all the tasks of each of section and stops in the finish area.

1.3. Scoring

The robot scores points for completing tasks according to Table 2:

Table 2 Scoring points in elementary category

№	Action	Point
1	**2**	**3**
1.	The robot completes the task of section 1 and is fully in the starting area of section 2	40
2.	The robot completes the task of section 2 and is fully in the starting area of section 3	80
3.	The robot completes the task of section 3 and is fully in the starting area of section 4	40
4.	The robot pushes out one skittle outside the ring of section 4	5 (for each of 8 skittles)
	Total maximum	**200**

2. Line follower with fixed obstacle

2.1. Field specifications

For general Field Specifications see the Journey General Contest Rules.

At Line Follower with Fixed Obstacle section, an obstacle in the form of a solid parallelepiped fixed to the field and having such dimensions as $(250\pm5)\times(120\pm5)\times(65\pm2)$ mm (W×H×D) is put in an arbitrary place across the line.
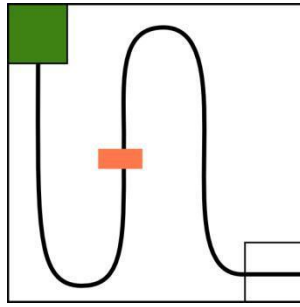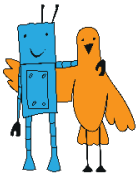
Fig. 3. Line Follower with Fixed Obstacle field

A standard single building brick may be used as an obstacle.

2.2. Procedure for completing task

For Procedure for Completing task see the Journey General Contest Rules.

3. Labyrinth

3.1. Field specifications

For general Field Specifications see the Journey General Contest Rules.

3.2. Procedure for completing task

For Procedure for Completing Task see the Journey General Contest Rules.

4. Line follower with slide

4.1. Field specifications

For general Field Specifications see the Journey General Contest Rules.
At the Line Follower with Slide section, a white two-slope slide is set with the base angle of max. 20° at the bottom and the width of 30 cm, and marked with a black line which is similar to that used at the field (see Fig. 4).
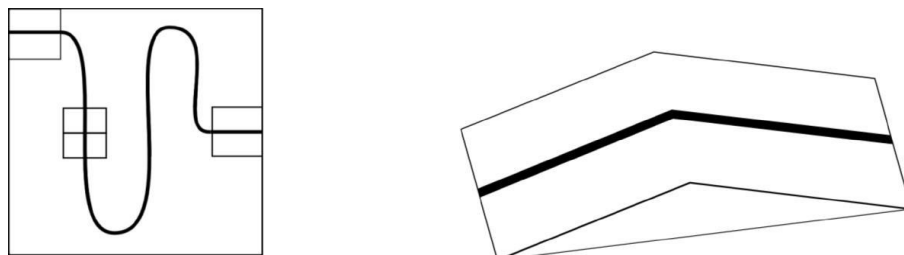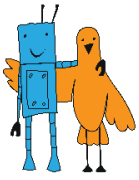

Fig. 4. Line Follower with Slide field: a) general layout; b) slide

4.2. Procedure for completing task

For Procedure for Completing Task see the Journey General Contest Rules

5. Kegelring

5.1. Field and skittles specifications

For general Field and Skittles Specifications see the Journey General Contest Rules. Figure 5 shows a general layout of the field.
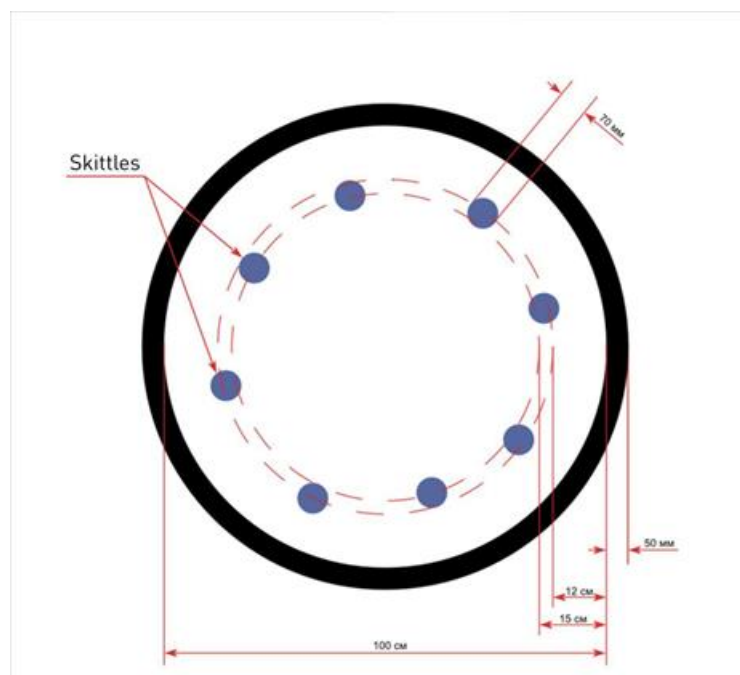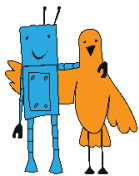

Fig. 5. Kegelring field general layout

5.2. Procedure for completing task

The robot must push outside the ring all the skittles and then stop inside the ring.
Before the race starts the procedures described in the General Contest Rules should be held.

6. Revision History

№	Doc. No.	Date	Note	Previous version	Update version
1	2	3	4	5	6
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