

## Robot



Robot can be made of any non-hazardous hardware components.



Recommended overall dimensions of the robot: 350x400x400 mm (height x length x width).



The robot must be wireless, with a power supply on board.



Use of the IR remote control is PROHIBITED.



During the event it is FORBIDDEN to harm other participants of the competition (communication interference, dangerous structures).

## How to take part



Look into competition schedule on RTC Cup official website.



Pick a suitable competition and register your team. Usually registration opens a month before competition.



Pass the preliminary selection based on the submitted materials: photo, video and description of the robot. Selection conditions for all competitions are different. Some of the competitions are held without selection.



Competitions for young engineers, students and schoolchildren who create robotic systems for working in extreme conditions

[cup.rtc.ru/en/competitions/38-rtccup-2020/153-2020-final-en](http://cup.rtc.ru/en/competitions/38-rtccup-2020/153-2020-final-en)

## Competition Schedule

The schedule can be found on RTC Cup official website. In 2020, the International and National stages of the RTK Cup robotic competition are held.

## Competition Organizer



The Russian State Scientific Center for Robotics and Technical Cybernetics (RTC)



Competitions are held under the State contract of Ministry of Science and Higher Education of the Russian Federation dated June 22, 2020 No. 23.598.11.0135

[www.rtc.ru](http://www.rtc.ru)

## RTC CUP: Final ROBOTICS COMPETITION NATIONAL STAGE December, 5-6, 2020, Saint-Petersburg

2 attempts, for 10 min each

### Can your robot complete the route?

- ▶ autonomously complete tasks
- ▶ overcome obstacles



## WELCOME RTC FINALISTS !



[cup.rtc.ru](http://cup.rtc.ru)



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## RTC Cup Competitions are carried out in 2 stages

### "SCOUT" category



The operator can observe the actions of the robot. 2 robots from different teams can pass the test site at the same time.

### "EXTREME" category



The robot is out of sight of the operator, control is carried out using the robot's video vision. There is one robot at the test site.

## RTC Cup Competitions

The youth robotic competition RTC Cup has been held since 2013. The purpose of the Competition is to create conditions: for the development of scientific and technical creativity of students and career guidance of youth in the direction of robotics; to integrate robotics with basic academic disciplines.

In the period from 2013 to 2019, over 3,000 talented robotics from 63 cities of Russia took part in 71 competitions. Competitions are included in the Lists of Olympiads and classes of intellectual and (or) creative competitions, events aimed at developing intellectual and creative abilities, opportunities for physical, culture and sports, interest in scientific (research), creative, physical culture and sports activities, as well as for propaganda scientific knowledge, creative and sports achievements for the 2016/2017 and 2017/2018 academic years, approved by the Ministry of Education and Science of Russia, and for the 2019/20 academic year - by the Ministry of Education of Russia.



## Test Site



### Trials

Each pass trial is a simulation of polygonal terrain or emergency situations. Test cells can be placed in any order, which allows you to create unique tracks for the passage of robots.

### Tasks

The list of tasks for robots to perform includes various interactions with objects on the polygon: moving objects, turning valves, pressing buttons, opening doors, reading QR codes, moving along a line or along a wall, etc.

### Tower Challenge

The Tower test visually resembles the RTC tower, which is the symbol of the institute. As with other challenges, the Tower may not be included in the polygon configuration at individual events. This element is a separate test, which involves the completion of certain tasks.

The structure of the "Tower" contains an elevator, which is set in motion by typing a code on the keypad. The elevator moves the robot to the top of the tower, from where the robot can make a Leap of Faith and earn extra points.

