



ROSTEC
DRONE
FESTIVAL

ROSTEC DRONE FESTIVAL 2019

August the 24th – 25th, 2019

Moscow, Gorky Park



DRONE SPORTS

General information

Date	August the 24 th – 25 th 2019
Venue	Russia, Moscow, Gorky Park
Time zone	UTC +3
Currency	Russian Ruble (1 USD ≈ 65 RUB)
Visa requirement	Visa is required for residents of most countries
Electrical socket	220 V, 50 Hz, socket types: C, F
Climate	Continental
Temperature	At daytime 22 °C, at night 12 °C
Altitude above sea level	≈ 130 m
Telephone in case of emergency	112
Telephone code of the country	+7
Telephones for urgent questions (for Russian pilots)	+7 (965) 264-99-03 (Vadim Dzema) +7 (906) 055-81-70 (Alexander Bezlepkin)
Telephones for urgent questions (for foreign pilots)	+7 (903) 272-07-00 (Valerie Romanova) +7 (926) 377-69-69 (Kirill Shukin)



1. Technical requirements for drones and equipment

- 1.1. **Drone frame.** Distance between opposing motors: from 190 to 280 mm.
- 1.2. **Propellers.** Diameter up to 6" (inclusive).
- 1.3. **Battery.** Rated voltage up to 22.8 V inclusive (up to 6S inclusive). The battery's balancing connector must be free and accessible.
- 1.4. **LED light.** Not less than 24 LEDs. The location of the diodes should provide visibility of illumination both behind and in front of the drone. The ability to switch the color (red, yellow, blue, green). The color change should take no more than 1 minute. It is recommended to use the addressable LEDs with the controller.
- 1.5. **Video transmitter.** Admitted models of the transmitters are the following: ImmersionRC Tramp HV, TBS Unify Pro, FuriousFPV Stealth. Frequency: 5.8 GHz. The ability to change the channel and power (standard set of channels, 25 or 200 mW). Channel change should take no more than 1 minute. The use of SmartAudio or IRC Tramp protocols is recommended.
- 1.6. **OSD function.** The pilot's name or nickname must be indicated above the camera image.
- 1.7. **Failsafe function.** In case of a signal loss, the motors must stop.
- 1.8. **FPV-goggles.** An input for analog video signal is recommended.

2. Participants of the competition

- 2.1. 32 pilots become the participants of the competition: 16 pilots from the Russian Federation, who passed the selection and received an invitation for participation, and 16 foreign pilots.
- 2.2. Participants are admitted to the competition after registration procedure and technical control. The pilot must be personally present at the registration and have all the drones without propellers, with a charged battery, a remote controller and FPV-goggles.
- 2.3. Participants are admitted to participation if they have a valid insurance policy against accidents during practicing aircraft modeling sports. The insurance policy must be provided to the organizers in electronic or printed form.
- 2.4. In case of non-compliance with technical requirements, as well as in case of the absence of the pilot's insurance policy, the organizers have the right to refuse to register the pilot for the competitions.

3. Prize fund of the competition

- 3.1. The total prize fund of 2 500 000 rubles is distributed among the pilots who took the first 8 places. The distribution is as follows:

1 place - 1 000 000 rubles
2 place - 600 000 rubles
3 place - 400 000 rubles
4 place - 150 000 rubles
5 place - 125 000 rubles
6 place - 100 000 rubles
7 place - 75 000 rubles
8 place - 50 000 rubles



4. Rules of the competition

- 4.1. The competition consists of three stages: qualification stage, selection stage и final stage. Training flights are provided before qualification and selection rounds.
- 4.2. The duration of flights at all stages of the competition is 90 seconds. The duration of training flights is 120 seconds.
- 4.3. The number of flights in each stage, as well as the number of laps in these flights, will be set by Race Director before the start of the corresponding stage.
- 4.4. **The qualification stage** is held in accordance with the schedule, which will be announced to the pilots at the briefing. All pilots will be divided into 8 groups of 4 people, and each group will be assigned the time of the qualification stage. Before the start of the qualification stage, the pilots will have to go through the registration and technical control procedures.
- 4.5. The result of the qualification is the best time of whole track completed during all the qualification flights.
- 4.6. All the pilots pass to the elimination stage. They will be ranked according to the results of qualification and divided into groups of 4 people.
- 4.7. **The elimination stage** is held according to the Double Elimination system (elimination after two defeats). The pilot, who takes the first or the second place in the flight of his group, goes to the next round without defeat (winners bracket). The pilot, who takes the third or the fourth place, gets one defeat. Getting the first defeat, the pilot also goes to the next round (losers bracket). After the second defeat the pilot is eliminated from the competition.
- 4.8. The places taken by the pilots in the flight are determined based on the time of passage of the set number of laps. In cases when two or more pilots do not pass the set number of laps, their places are determined based on the number of laps, and in case of the passage of equal number of laps, the places are determined based on the time of their passage. In cases when two or more pilots do not pass any lap, their places are determined based on the qualification results.
- 4.9. Two pilots who passed the elimination stage without defeats (from winners bracket), as well as two pilots who received one defeat (from losers bracket), pass to the final stage.
- 4.10. **The final stage** consists of a single flight. Places that will be taken by the finalists are determined according to the same rules as the places in the flight of the elimination stage. Double Elimination system is not valid in the final stage.

5. Preliminary program of the competition

23.08.2019

20:00 - 21:00 - briefing

24.08.2019

10:00 - 12:00 - registration, training and qualification of group 1 and group 2

12:00 - 14:00 - registration, training and qualification of group 3 and group 4

15:00 - 17:00 - registration, training and qualification of group 5 and group 6

17:00 - 19:00 - registration, training and qualification of group 7 and group 8

25.08.2019



09:00 - 11:00 – training for all groups
12:00 - 14:00 - elimination stage, round 1
14:00 - 16:00 - elimination stage, round 2
16:00 - 17:00 - elimination stage, round 3
17:00 - 18:00 - elimination stage, round 4
18:00 - 19:00 - elimination stage, round 5
19:30 - 20:00 - elimination stage, round 6
20:00 - 20:30 - elimination stage, round 7
21:00 - 21:30 - final stage
21:45 - 22:00 - awarding of winners

6. Rules of behavior and flights

- 6.1. Flights off the track are prohibited.
- 6.2. Entrance to the track must be agreed and coordinated with the organizers.
- 6.3. All pilots who do not participate in the current flight are not allowed to turn on drones and video transmitters.
- 6.4. Pilots, who participate in the current flight, must be present at the Pilot Zone.
- 6.5. Each pilot can be accompanied by one assistant. The presence of other pilots or other persons in the Pilot Zone is prohibited.
- 6.6. Pilots and assistants (who are in the Pilot Zone during the flight) are not allowed to get up, talk loudly or in any other way disturb other pilots and assistants.
- 6.7. Passage of the route is performed on the trajectory, indicated between obstacles, as well as through the gate at the finish. If the trajectory is passed incorrectly or if a trace element is skipped, it is necessary to return and pass the trajectory or the element correctly. Otherwise, the lap of the pilot, during which the violation was committed, will not be accepted.
- 6.8. In case of drone falling and turning upside-down it is allowed to use the reverse rotation of the motors.
- 6.9. Drone landing is allowed only in the designated area.

7. Algorithm of a flight performance

- 7.1. Pilots, who participate in a current flight, must be in a Pilot Zone.
- 7.2. Pilots who participate in the next flight must arrive to the Waiting Zone before the current flight and bring a drone, remote controller and FPV-goggles.
- 7.3. The organizers call the names of the pilots in turn and take their drones. If the pilot is not in the Waiting Area or does not give his drone for any reason, he will not participate in the flight.
- 7.4. After the termination of the flight of the previous group of pilots, pilots from the Waiting Area proceed to the Pilot Zone and take their seats. At this point, the pilots of the next group must be in the Waiting Area.
- 7.5. The organizers install timekeeping system transponders on drones and place them on launch pads.
- 7.6. Pilots connect their FPV-goggles to video receivers provided by the organizers. If pilot's goggles cannot be connected to a video receiver, the pilot can use his own receiver. In this case, the pilot claims related to the quality of the video signal will not be accepted.
- 7.7. Drones are turned on by the organizers, pilots check the quality of the video signal and check the readiness of the drone to start the motors.
- 7.8. Pilots raise their hands when ready.
- 7.9. The flight begins after the sound signal.



8. Re-flights

- 8.1. In case of a stop of a flight at the request of the organizers, the re-flight of the whole group is provided.
- 8.2. In case of a false start of one of the pilots, the re-flight of the whole group is provided.
- 8.3. In case of a collision of drones on the section of the track, situated between the launch pad and the first element of the track, the re-flight of the whole group is provided.
- 8.4. In case of a collision on the first element of the track or after it (if all the pilots pass the trajectory correctly) the re-flight is not provided.
- 8.5. In case of a collision due to the incorrect passage of the track by one of the pilots, the re-flight of the whole group is provided (except for the violator).
- 8.6. In case of a collision due to the incorrect entry to the landing zone by one of the pilots, the re-flight of the whole group is provided (except for the violator).
- 8.7. In case of a damage of drone of one of the pilots, the re-flight is not provided.
- 8.8. The re-flight can be announced by the organizers following the consideration of the appeal.

9. Violation of the rules

- 9.1. The pilot will be issued a warning in case of violation of the following rules:
 - entry to the track without consent of the organizers;
 - absence of a pilot in the Waiting Area by the end of the previous flight;
 - interference with other pilots or assistants (by loud talk, walking or other actions);
 - false start;
 - incorrect passage of the track or skipping of its element without returning for correct passage;
 - incorrect entry into the landing zone in a collision of drones
- 9.2. The pilot will be disqualified in case of violation of the following rules:
 - flights performed off the track;
 - turning on of a drone or video transmitter during the flight of other pilots;
 - usage of a video transmitter, the power of which exceeds the level set by the organizers;
 - the pilot is in a state of alcoholic or other intoxication;
 - re-warning in case of any violation.
- 9.3. By decision of the organizers, the pilot may be issued a warning for other violations of the rules and actions not listed in this section.

10. Appeals

- 10.1. If it is necessary to make any application, to file a complaint or challenge the intermediate results of the competition, the pilot has the right to appeal by filling out a form that will be provided on request. The document will be considered by the Main Judge and the Race Director, after that a decision on the merits of the appeal will be announced.
- 10.2. The completed form must be given to the Race Director within 10 minutes after the flight or other occasion that appears in the appeal.

