

# **EXFC 2023**

## **Single Freestyle**

### *Competition Rules*

This is the contest EXFC 2023 for pilots of RC semi-scale models for aerobatics, which are flying on the base of supporting music, selected by pilot himself. It is going to be organized ones every 2 years and access to it will have all pilots of any age.

#### **Access conditions:**

##### ***Entry fee:***

Pilots, who will send the entry form by e-mail or by fax in advance will pay on site entry fee 80,- EUR (1800,- CZK).

##### ***Time schedule:***

Time schedule of the contest will be published in advance on the official web-pages of the contest [www.exfc.eu](http://www.exfc.eu) at least 14 days before the contest. Beside of this stated time schedule of the contest the pilots will have chance for practice flying providing that they would obey the rules of the given airfield on which the local RC Club is organizing the event.

##### ***Technical characteristics of the model:***

The model for this contest must be semi-scale model of real aircraft used for aerobatics. The differences from the real aircraft are not going to be measured, but the model must be similar to its pattern.

#### **We only allow exhaust smoke to be used**

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#### **Monoplane:**

Minimum wingspan: 2800 mm

Minimum ccm: 150

## **Biplane:**

Minimum wingspan: 2400 mm

Minimum ccm: 130

The max. TOW (take off weight) is 25 kg, including fuel, smoking oil and all additional elements.

Reason why we limited size and engine is that we want to compare the same sizes of the planes and also we want to be closer to scale aircrafts.

### ***Technical inspection of the model:***

Each pilot is fully responsible for technical stage of his model and he is obliged to perform technical checking of the model before each flight. Each pilot will confirm the proclamation about this duty during registration to the contest.

No gyros will be allowed during this competition. Should anybody be tempted to use one, few selected planes will be checked and if any kind of devices helping to control flight are found, pilot will be DSQ from EXFC immediately without any discussion.

We will measure the maximum weight of the planes.

### ***Conditions for the attendance:***

To attend the EXFC contest the pilot must have valid sporting license respectively registration issued by NAEc of his country and must be insured against the damages caused by his model on the asset or health of the participated (third) persons.

The pilots, who placed on previous EXFC on first 5 places will be accepted automatically.

### **Selection of the pilots:**

1 pilot from each most distant country

The rest of pilots will be. Selected from online lottery at 1.8.2023

Maximum of single pilot is limited to 40

The rest of the pilots will be added like a substitutes.

### ***Prohibited:***

Because of safety, environmental and other reasons, following is prohibited:

- All the pyrotechnics elements include the smokers on the wings, fuselage, etc...
- reverse pitch propeller on electric powered planes
- any high speed maneuvers or flight directly against pilots and judges
- touching ground in flight (in hover, harrier, etc.)

### ***Scoring system:***

The qualification flights are evaluated by at least 4 judges. The semifinal and final flights of singles and the flights of teams are evaluated by at least 5 judges. The qualification flights, two rounds of semifinal rounds and 3 rounds of teams will be normalized on 1000 points of the winner.

The judges are evaluating each flight by points from 0 to 10, the highest and lowest mark for each criteria (see below) are automatically crossed out.

### ***The conditions for flight performance:***

- Duration of each free style program has to be 4 minutes +/- 6 seconds and is measured by the timekeeper. Time is measured from the waving down of the pilots (or helpers) hand. The end of time is given by audible signal of the timekeeper, by the end of the music or by landing of the model.
- Safety line is the opposite edge of the tarmac runway. In the other words the safe area is grass and field behind the runway. Pilot during the flight must not cross over of this line or better to say break the imaginary plane perpendicular to the earth in the safety line. Any infringement of this rule will be evaluated by judges by downgrading and flying behind the judges means immediate disqualification in given flight and flight marshal will command the pilot to land immediately.
- Free style program must be flown on music selected by pilot himself. Each pilot is obliged to supply the music in advance by e-mail in mp3 format. Dead line for supplying the music is August 1th, 2023. The music has to be only 4 minutes +/- 6 seconds long!!!
- In the case of jettisoning of some substantial part of the model during flight, the pilot is obliged to land immediately, his score has to be subtracted by 100 points and pilot does not have right for any re-fly.

- Judges are evaluating the flight only during the sound of music, all manoeuvres or creations after the end of music or after the signal of the timekeeper are not evaluated and pilot is obliged to land as soon as possible.

***Qualification key:***

Organizer does have right to limit the number of competitors on 60 single pilots and 10 teams.

- From 3 preliminary rounds of singles are 20 best pilots coming to semifinal, better normalized result has to be used.

- From two semifinal rounds of singles are 10 best pilots coming to first final round, better normalized result has to be used.

- From first final round of singles 5 best pilots are coming to second final to determine the winner.

- From 3 rounds of teams only two best normalized results are used and 3 best teams are coming to the final of teams to determine the winning team.

***Starting order:***

For first qualification every pilot will draw a number from box (or hat) which represents his starting number.

For second qualification round of singles and second round of teams will be starting order given by results in previous round, it means the pilot (team) with worst result in previous round will fly as first and so on. Same rule will be used for semifinals and finals.

***Evaluation criteria:***

1. Originality and difficulty of the program ( k = 30)

It has to be evaluated not only the originality and difficulty of whole program, but as well the originality and difficulty of the performed maneuvers and the placing of whole program in front of judges and spectators. Repeated performing of identical maneuvers could be evaluated by decreasing of the mark for this criteria.

**2. Using of the total flight area (k = 20)**

Model has to be flying in whole available area in front of the spectators to allow the best observing of his performances.

### **3. Preciseness of performance of the maneuvers ( k = 20)**

It has to be evaluated the preciseness of performed maneuvers, precise ending of the rolls and the hesitations in point rolls, keeping the plane of loops and precise connection of the maneuvers. Preciseness of the performance of original and so far not known maneuvers has to be not evaluated.

### **4. Using of Smoke ( k = 15)**

It has to be evaluated the using Smoke for increasing of the attractiveness of whole program. Each judge can use all the points since 0 till 10 to compare impression from smoke. Smoke on during the whole flight will be judge only with 1 point.

### **5. Harmony with used music, program choreography ( k = 30)**

It has to be evaluated the harmony of performed maneuvers with character and rhythm of used music. As well has to be evaluated the manner of synthesis of the supported music and whole choreography of the performed program, in which the fast and dynamical parts have to be alternated by slow and fluent parts.

### **6. Synchronization of models ( k = 30) Teams only!**

The models have to perform the manoeuvres synchronously and in accordance with the music.

### **7. Total impression ( k = 20)**

By this criteria has to be evaluated over all impression from the performed flight, the creativeness of the program and its impressiveness on the spectators. It has to be evaluated the arrangement of the program and its performance from which it has to be obvious, that it is not only chaotic showing not mutually connected maneuvers. It has to be evaluated how the performed maneuvers were matching the rhythm and style of supporting music. It must be visible, that whole program is carefully prepared, exercised and safely performed.

#### ***General rules:***

- Pilot must have his model during whole performance safely under his control!
- Each crossing over the safety line means downgrading from the judges and crossing over the line of judges means immediate disqualification for the pilot, 0 points for the flight and immediate landing of the model.
- The judges and spectators must have the impression, that model itself is feeling the music on which it is flying.

- Repeated long lasting hanging on the prop connected by few snap rolls is not any choreography and definitely not the artistic aerobatics!
- The reaction of spectators is the pointer showing the impressiveness of the performed program!

Alternatively finals could be done as fly and win or lose. This mean all previous scores will be nullify, everyone has only one flight where goes about everything. But this system is only by request of pilots to Contest director or EXFC manger before finals.

### ***Contest of Teams – Group Aerobatics***

- For contest of teams can be registered group of 2 or 3 pilots who have to fly on common music so called paralell or mirror synchronous aerobatics
- The performance of the group is evaluated by judges with the same criteria as single aerobatics, but one additional criterium will be used to evaluate synchronous performing of the manoeuvres
- In the case one pilot of the group would stop the flight for any reason, judges will stop the evaluation of the whole group