

## **X Class F3C-Freestyle**

### **X.1 DEFINITION OF A RADIO CONTROLLED (R/C) HELICOPTER**

An R/C helicopter is a heavier-than-air model aircraft that derives all of its lift and horizontal propulsion from a power driven rotor system(s) rotating about a nominally vertical axis (or axes). Fixed horizontal supporting surfaces up to 4 percent of the swept area of the lifting rotor(s) are permitted. A fixed or controllable horizontal stabiliser of up to 2% of the swept area of the lifting rotor(s) is permitted. Ground effect machines (hovercraft), convertiplanes or aircraft that hover by means of propeller slipstream(s) deflected downward are not considered to be helicopters.

### **X.2 GENERAL CHARACTERISTICS**

The swept area of the lifting rotor is not limited. The engine is not limited. Limitations are:

- a) **WEIGHT:** The weight of the model aircraft (without fuel with batteries) must not exceed 6 kg.
- b) **GYROS:** The use of automatic stabilisation devices that utilise external references is forbidden. The use of pre-programmed flight manoeuvres is forbidden. The use of an electronic rate sensor is limited to rotation about the yaw axis. The use of a governor is permitted.
- c) **ROTOR BLADES:** All-metal main or tail rotor blades are prohibited.

### **X.3 CONTEST AREA LAYOUT**

Refer to Drawing Annex A. The drawing shows a recommended layout, but the distances should be kept for safety reasons.

### **X.4 NUMBER OF HELPERS**

After leaving the start box, the pilot is allowed on helper. The helper may give information to the pilot during the flight.

### **X.5 NUMBER OF MODELS**

The number of models is not limited. One model may be used by several pilots.

### **X.6 THE OFFICIAL FLIGHT**

Before the flight the pilot has to be officially called. The model can be flown or be carried to the flying area. The flight begins in the compulsory schedule when the model leaves the start box, in freestyle with the announcement of the start.

### **X.7 SCORING**

The number of judges is at least three, max. five. In the compulsory each manoeuvre is given a score between 0 and 20 points by each judge. A manoeuvre not completed or not flown according to the description shall be scored zero (0) points. If a manoeuvre is scored zero points all judges must agree. In freestyle the scoring is made after the flight according to the scoring criteria.

The estimation of the noise level is made by the majority of all judges. The flight time is measured by one judge or an official. In the compulsory only manoeuvres that are performed completely in the flight time of 8 minutes will receive a score. If the flight time in freestyle is less than three or more than five minutes, there will be a downgrade of 5% for this flight.

The prohibited flying area is observed by the judges. Flying over the safety line outside the area of the flying site once will be penalized with a downgrade of 30%. If this happens twice or if the safety line is crossed inside the area of the flying site the flight will be scored zero points.

## X.8 CLASSIFICATION

After the completion of every round all scores will be normalized by awarding 100,00% to the highest scoring flight. The remaining scores are then normalized to a percentage in the ratio of actual score over the highest score of the round.

There shall be two rounds each compulsory schedule and freestyle. However, the lowest score of each competitor will be the throwaway score, the other scores are added and the result is the final score. If only one round is possible then the classification will be based on that round.

Ties will be broken by counting the throwaway score. If the tie still stands, a „sudden death“ freestyle fly-off must take place until a decision is made.

## X.9 ORGANISATION

The flight order for the first compulsory round will be determined by a random draw. The flight order for rounds two (freestyle), three (compulsory) and four (freestyle) will start after the first, second and third quarter of the initial order.

### PREPARATION TIME:

A competitor must be called at least 5 minutes before he is required to enter the start box. The model aircraft may be hovered only in the start box up to eye level.

After the preceding competitor has finished his flight, the competitor is given another minute (two minutes in freestyle) to make last adjustments or checks, then his flight time starts.

## X.10 FLIGHT PROGRAM

### COMPULSORY:

Every pilot makes his choice of eight different manoeuvres from the list of compulsory manoeuvres (ref. Annex B and C). He may choose different manoeuvres in each round. The list with the manoeuvres chosen for a round must be delivered to the contest director or an official before the beginning of the round.

The flight time in the compulsory rounds is eight minutes.

### FREESTYLE:

Each competitor is given a flight timeframe of at least three, max. five minutes. During this time there are no restrictions for the flight or the performed manoeuvres except the safety line. The play-back of music is not allowed.

### MUSIC FREESTYLE (optional, only demo flights and not part of the competition):

The same criteria as in Freestyle, but the play-back of music during the flight is prescribed.

### PERFORMANCE OF THE SCHEDULES:

The competitor may choose his position during the flight with one constraint. If the model comes to fly between pilots and judges, the model must keep a safety distance of at least ten metres to the judges. The non-observance of this distance will be penalized by a severe downgrade on the scoring criteria safety up to a zero scoring for the manoeuvre.

Annex A Contest area layout

