Aerobatics with remote controlled model aircraft

The desire to freely move around in the third dimension of the airspace around us is probably as old as mankind itself. Every day, we see the birds doing it. Once the first humans conquered the art of flying, they soon wanted to make the most of this new freedom and began to experiment with aerobatics.

The first aerobatic pilots

The first aerobatic pilots used wires to control their models, which is the origin of the international designation Control Line flying. This method of flying manoeuvres is still done very successfully and World Championships are very popular. These days, model aircraft are powered by combustion engines or electric motors and fly fixed schedules that are judged by experts.

RC Indoor Aerobatics

This relatively new discipline is for very lightweight RC model aircraft weighing between 60 and 90 grams. As the prescribed schedules of manoeuvres are flown indoors, all models are powered by electric motors. The maximum duration of an aerobatic display is 5 mins.

RC Aerobatic Power Model Aircraft

Two classes for RC aerobatic power models have become established in recent years: The traditional class for models with a maximum weight of 5 kg which has existed for about 60 years and is now designated “F3A” by the FAI, and the newer class “F3M” for semi-scale big model airplanes (max. 20 kg). While F3A World Championships have been regularly held by the FAI since 1960, there have not been any FAI World Championships for the big models. There are, however, numerous competitions held in the USA and in Europe by American and European organizers.
F3A is popular around the world

While 20 years ago a majority of competitors designed and built their own aerobatic models, not many self-designed aircraft can be seen at competitions today. Most models are bought pre-fabricated or complete, given an individual finish if required and fitted with propulsion and an RC system. 2003 saw the beginning of the big trend towards the use electric motors which now dominate at competitions.

Demanding schedules of manoeuvres

Sophisticated propulsion and control technology let participants conjure up ever more demanding manoeuvres. The concept, which is now 30 old, requires one manoeuvre to be flown in each of the middle, the right-hand side and the left-hand side of the flying window. This results in long performance times of around 8 minutes. The points given by the judges are standardised using a complex statistics program.

Aerobatics is versatile

Power model aircraft
- Aerobatics with control line model airplanes (F2B)
- Indoor precision aerobatics
- Outdoor precision aerobatics - models up to 5 kg (F3A)
- Outdoor precision aerobatics with semi-scale big model airplanes (20 kg)

Aerobatics with model gliders

Precision Aerobatics with model helicopters

F3C/N Aerobatic Helicopter

F3P Indoor Aerobatic Model Aircraft

Aerobatic Glider