

## Public Letter 2/07

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[www.fai.org/aeromodelling/ciamflyer](http://www.fai.org/aeromodelling/ciamflyer)

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# Model Flight Training Today

## Learning to fly a radio controlled model aircraft

**Previously, despite experienced instructors, the introduction to radio controlled model flying always involved a certain risk. The instructor would have to know exactly when to intervene with his pupil. If he was too late, a crash would be unavoidable and the training flight would come to an abrupt end.**



### Flight Training

As a beginner today, you no longer need to be afraid, as modern radio control technology provides so called instructor-pupil systems. There are also excellent model flight simulators for PCs. Here, we will discuss real flying training. At the core of this training system are two transmitters that are connected by means of a cable. The first transmitter – let's call it the pupil transmitter – is operated by you. You can use it to

control the training model as normal. The second transmitter is the instructor transmitter. This means that the instructor can intervene at the push of a button, whenever required and take over the controls. Your flying instructor will of course keep a very close eye on the training aircraft's path – his hands ready on the joystick and on the "intervention button" with which he can disable the signals from your transmitter. With these now widely tested and proven systems, the flying instructor can take over entire flight sequences from a pupil such as the launch or landing phases, simple aerobatics figures etc. As your skills improve, your instructor's interventions will become less frequent and shorter. This results in a continuous learning process that also helps to keep the training model undamaged. Most radio control makes and types provide such connection options – or "instructor-pupil cables" as we call them – and the corresponding software. They will, however, not necessarily work between different makes.

### Sophisticated Training Aircraft with Electric Propulsion

Imagine you and your friends going to a model airfield to really learn how to remotely control a model aircraft. Maybe there will already be two or three training aircraft in operation. Modern training models with electric motors are quiet and do not disturb anyone. Electric motors do

not produce exhaust gases and are very reliable in operation. Motor cut-outs during training are always unpleasant and can result in outlandings and damage to the training model. Electric training aircraft can easily remain in the air for 30 minutes. The batteries can be changed in seconds between flights. We will now introduce two such well proven training models:





**Graupner Trainer 65**

With its 170 cm wing span and a profile thickness of 18% you can immediately see how forgiving it is. The training model has a robust design and is fully assembled in about 5 hours. Its starting weight is approx. 3000g and its flying characteristics present no problems whatsoever. Even in inexperienced hands this model is good-natured and will forgive nearly everything. Its main use is definitely in basic training with starting and landing training. In simple aerobatics the strongly curved, thick profile does have a negative influence, especially during inverted flying. Loopings and turns, however, can be flown without any problems. The fastening of the wings is the only thing that is not convincing and has to be replaced with an attachment using hardwood dowel and nylon screws.



**Kyosho Calmato**

The Calmato is slightly smaller (160cm) and more filigreed. It is available with high or low set wings. This kit also provides the purchaser with a high-quality product that can be completed in a few hours. The wood quality is slightly lighter than for the Trainer 65, which can be seen in the flying

weight of 2500g. The Calmato shows its strengths during basic aerobatics training. The thinner profile runs a bit better and inverted flying presents no problems. The stalling characteristics are also very forgiving.

**Motors**

Both models are equipped with the same propulsion: Motor Axi 4120/14 with one APC 13x7" propeller. Kontronik Jazz controller. Thunderpower Lipo battery 5S/5300mAh. Standard servos and FM receiver. This propulsion system allows about 40 minutes of uninterrupted instructor-pupil flying. (One third to half throttle to maintain constant altitude). Neither motor nor controller and battery will become more than slightly warm to the touch. The external motor is optimally cooled. The electric propulsion is particularly beneficial when training for landing. It can be continuously throttled without fear of cut-outs and there is no delay in response.

