

## Fast Races with Electric Power

**Electric Pylon Racing is a discipline involving some of the highest speeds in aeromodelling. These days, times of around 60 seconds for ten circuits around a triangular course of 400 m, corresponding to speeds of 300 km/h and more, are not unusual.**



## Back to Basics

Pylon Racing models in the early days of electric flying were built in a similar style as models with combustion engines. They were large heavy lumps weighing 2 kg and more and powered with nickel cadmium batteries (with voltages of up to 45 V). Current rules make for much smaller and lighter models which is an advantage, not only for transport, but also for take-off and landing as these models, unlike corresponding ones with combustion engines, don't use wheels to take off from a runway but are launched by hand. This makes racing events independent of paved airfields.

## Official FAI World Championships since 1994

The first World Championships for electric Pylon Racing models were held in 1994 in Australia. At the time, it wasn't so easy to convince aeromodellers that, in addition to the classic Pylon Racing categories, there should be a separate racing category for electric models. For many years, standards were set by competitors from Germany and the USA – not least due to the technical headstart of some manufacturers of electric motors. This has changed in recent years and the situation is more

balanced, as the market now offers a wide range of high-performance motors.



**The geared motor – the centrepiece of the racing model with folding propeller (as models land on the fuselage) – which makes the models very quiet, the speed controller and the data logger for measuring energy consumption.**

## High Energy Efficiency

The remarkable thing about this racing category is the fact that it's not about brute force but about lightweight design and energy efficiency. These days, F5D Pylon Racing models, as they are officially called in the FAI rules, weigh only little over one kilogram and a data logger restricts energy consumption to 1,000 Watt\*min. Once the energy is used up, the motor stops. This means that prudent use of the available energy is paramount.



**A relaxed outfit, tough competition and good comradeship**

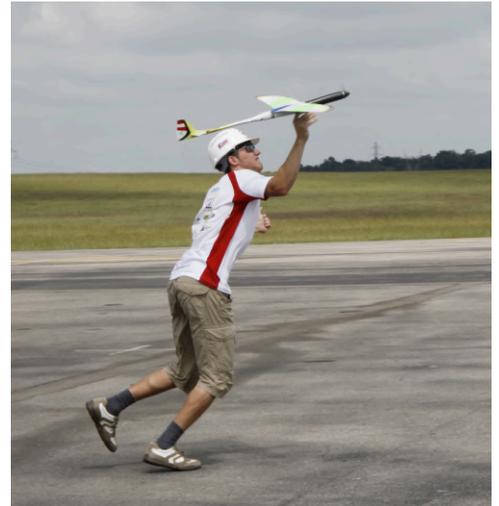
## Pylon Racing with Electric Motors is Increasingly Quiet

When it comes to optimising propulsion systems, improving the propellers plays a vital role. Larger diameter propellers are more efficient but their use is almost impossible without reduction gearing. Larger but more slowly rotating propellers are not only quieter but are also less susceptible to damage as they fold back when the model lands.

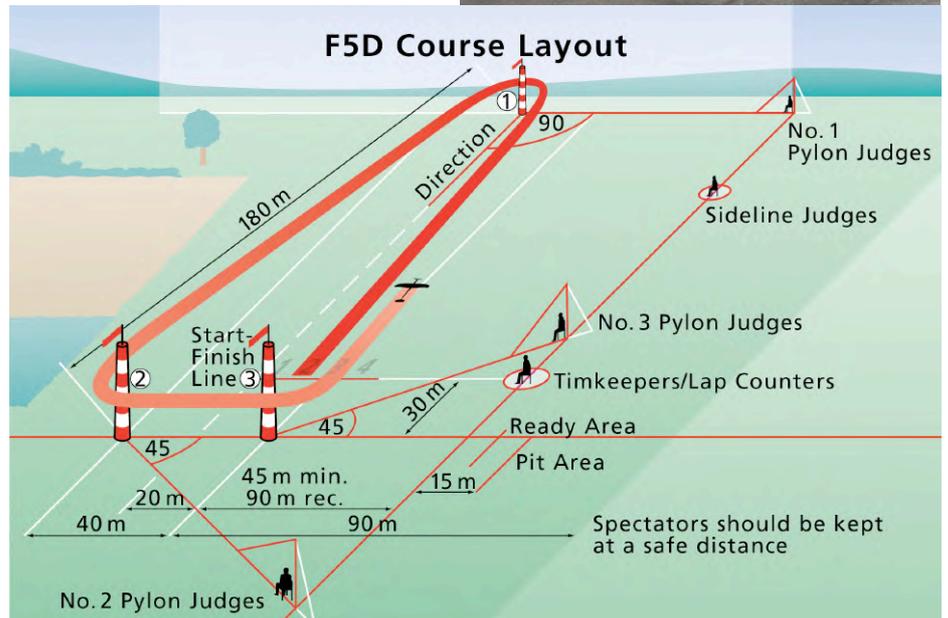
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FAI Electric Pylon Racing Rules see <http://www.fai.org/aeromodelling>



→ **Smaller and lighter F5D model airplanes are launched by hand.**



**Pylon Racing requires lots of space**

