

### CIAMFLYER

The Introduction to the Model Aircraft World



F2A Speed uses a pylon where the pilot have to put the handle during the official flight to get an accurate measurement of the speed but also to avoid whipping. At start the pilot have to work hard to get the engine up onto the pipe as demonstrated here by Paul Eisner of GBR, World Champion in 2016.

### **History**

When Control Line model flying developed and took off in the 1940's, Speed became one of the classes that attracted the most interest. Partly because human beings always wanted to compete and measure themselves against others, but also because Speed was easy as you fly against the clock. From the beginning, pilots competed in both 2.5 cc, 5 cc and 10 cc, but in the mid 1950's, It switched completely to 2,5 cc at Championship level. One of

the first known International competitions was held in the Belgian City of Knokke back in 1949, where pilots from a few countries participated. They competed in Speed and Stunt and the contest were held on the City Square, where the Municipality were so accommodating that they sawed down lampposts so that the circle could get its correct size. This was followed in 1951 by the first World Championship, which was also held on the square in Knokke. In 1960 the first combined World Championship was held in Hungary with F2A, F2B and F2C and since then it has just rolled on.



Swede Olle Eriksson show the 5 cc Speed Model he used when he flew at the World Champs 1954 in The Netherlands where he placed 2nd. He and the winner Bob Lutker from USA had the same time (222 km/h) but Bob won due to a better 2nd time. Photo taken in 2017 when Olle came to the field and tried to fly the old model.



Arnold Nelson of USA won the World Champs in both 1968 (256 km/h) and 1970 (240 km/h) using a piped Schnuerle ported TWA engine. The model seen on the photo can said to be typical for the 60 s.



The Worlds most successful Speed Flyer is Lluis Parramon of Spain with his 8 World Champs titles and 5 European Champs titles. This photo is taken after his win in Sweden in 1996 where he made 311 km/h.

# Development of models and engines

The classes with 5 and 10 cc engines have always been flown with glow plug engines while the 2.5 class also saw diesel engines at the beginning. But as the engines were developed with Schnuerle porting and pipes, diesel engines were no more competitive.

Early on, a pylon was used in the center where the competitor had to place his handle in order to get a more accurate timekeeping. In the beginning, Monoline (a technique where you steer by turning the line to give up or down rudder) was also allowed, but as the speeds increased, this was prohibited.

Nowadays, the fuel is regulated to 80% Methanol and 20% Castor oil, but in the beginning you could see the most diverse mixtures, some containing both toxic and dangerous substances.

The Speed model has also undergone development over the years, with the first ones being symmetri-

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cal in terms of wing and fuselage and mostly built of wood, and now being completely asymmetrical and built of composite. The only thing in common is that a metal pan is the heart of the model and that a cradle (dolly) is used to start the model. The dolly falls off when the model gets into the air and when the engine stops, a glide landing is made. Flying always takes place on an asphalt/tarmac surface and usually with a safety net around the circle.

#### F2A Speed today

Nowadays F2A is flown with piano wire lines with a diameter of 0.4 mm and a length of 17.69 meters (9 laps = 1 km) at speeds of just over 300 km/h. The engine has a piston/liner of ABC type and produces about 2.3 hp at 40,000 rpm with a single-blade carbon fiber propeller.

A speed model of today have only an inner carbon fiber wing and stabilizer on the outer side. One blade carbon fiber propeller and pipe as built in as it can be to reduce air resistance. The handle must have a crossbar that fits in the pylon and safety strap is mandatory.

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The model is still built around a metal pan where the engine, wing and fuselage are attached. There is only one inner wing made of metal or composite and with a length of about 1 meter. Over the years, longer wings have also been seen, but this is currently restricted by regulations. The fuselage and the stabilizer (only on the outside of the fuselage) are made of wood or composite and are screwed/glued to the pan.

The model must also be equipped with a shut-off so that you can land as soon as the timing is finished (and reduce the noise impact of the speed engine).

## F2G Speed - the new challenger

Today, speed is also flown with electric motors, where the model is more or less similar to a model in F2A and achieves the same speed. The battery is limited to 6 cells and maximum of 26 Volts.

#### **National Classes**

In addition to the international classes with World Championship and World Cup status, there are a number of national classes with engine sizes from 1 cc to 10 cc and in addition some classes are flown with Pulse Jet engines.

Many Vintage classes are also flown where the rules are based on how it was flown in the past, one popular class being Weatherman Vintage Speed.



Semispeed is an excellent choice of class if you want to start with F2A Speed. Same type of engine with pipe but much simplier model that are easy to build and fly.

#### Summary

If you want to fly speed today there are many classes to choose between and most information you need to know can be found by searching internet. Informative videos can also be found on Youtube. International rules can be found at fai.org. Don't hesitate to contact us if you have questions!

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