

Model Gliders

Probably the most popular way to fly a model aeroplane



The variety of model gliders is almost infinite. There are no less than 12 FAI competition classes alone, including radio-controlled and uncontrolled, with or without motor, and with wing spans of approx. 1 m to 4 m (up to 10 m outside the FAI categories).

Flying using nature's energy

While powerful air currents creating enough lift to support an aeroplane are

formed around hills, mountains and coasts, lowland gliding using thermal updraughts is also a wonderful experience. Both air movements – as well as their complex combinations – develop due to solar energy and make aeromodelling a fascinating combination of nature and technology. It is these diverse natural phenomena that make flying with model gliders such a hugely exciting and varied pastime. Powers of observation, the ability to quickly adapt to changing situations, an understanding of the

weather and its many varied phenomena are essential requirements for successful glider flights. Even the simplest models are capable of providing much enjoyment. There is a vast offer of lightweight gliders available on the market, mostly consisting of balsawood structures covered with paper, silk or film, which tend to be very affordable. Competition pilots use high-tech model gliders that may be packed full of electronics, depending on the competition class.

Different launch methods

Gliding on level terrain requires launch methods that bring the model to a desired flying altitude. Various launch techniques have been developed over the years, from simple towlines, similar to a kite, to modern electric motors.

Launching from a slope

is probably the oldest method. In hilly or mountainous regions in particular, flying on slopes using radio control has become a popular pastime. Fantastic updraughts are also often formed along coasts and smaller rises in terrain. Uncontrolled models may get lost in forests or gorges, destroying often hundreds of hours of work and significant financial investment.

In free flying, the flight path is determined by means of compass steering.

Start on a string

An old but still popular method: the high start. Models are towed to a desired altitude using a line, similar to a kite, and released. Instead of manual pulling, winches are also employed, usually electric. Both launch methods are used for free flying as well as radio-controlled models.



Motors for climbing:

Combustion engines are becoming increasingly rare outside of the relevant competition classes. Around the world and over a short period of time, motor gliders powered by electric motors have become the popular choice for aeromodellers. By no means all electric model gliders are self builds. There is a vast selection of hugely varied model e-gliders, starting from simple RC gliders made from plastic foam, to the high-tech planes used by competition pilots. These model gliders, with spans from one to several metres, are manufactured in high-precision moulds. Design and aerodynamics are often the subject of university research projects.



Note: These developments also apply to non-motorised model gliders and have been ongoing long before electric flight was established.



Source Internet

Competitions in the glider class with electric motors "F5J" are very popular

Aerotowing:

These launch methods are essentially the same as in manned aviation. A motor model takes off and tows a model glider by a 20 to 30 m long towline. Once the desired altitude is

reached, the pilot releases the line and separates from the towing plane. While the pilot enjoys their flight, circling and searching for updraughts, the motor model quickly lands in preparation for towing the next glider.

Climbing with rocket motors:

Rocket launches are a highly attractive and technically intriguing launch method. A lightweight model glider fitted with rocket propulsion rapidly climbs skywards until the motor is shut down. The pilot uses radio control to try and steer the model into the thermal updraughts and then land it on a target after a set period of time.

Conclusion

Flying using only wind and solar energy is the oldest and yet also the most modern way of travel by air. Energy consumption is limited to manufacturing the aircraft. It would be presumptuous to compare flying our model gliders to the flight of birds but there are some similarities. This makes us both proud and modest at the same time.



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