

## Paul Conran gets to experience the Silent 2 Electro ultralight glider in the beautiful setting of Ireland's Dingle peninsula

**A**S IF being on a totally deserted beach six miles long on a beautiful summer's day in the mountainous south west of Ireland wasn't good enough, imagine my delight at finding myself sitting in a brand new glider and about to self launch.

This was not just any old glider, but an FES, a Front Electric Self launcher. Called the Silent 2 Electro, and made in Italy by Alisport, it is one of a new generation of self-launching ultralight gliders with a maximum all-up weight restricted to less than 300kg. It is powered by a 22kW (30hp) electric motor positioned in the nose of the glider, which is driven by two 15kg batteries located just behind the pilot. The folding propeller is 1m in diameter, which is small enough to give good ground clearance. Max power is achieved at 4,500rpm.

Every year in late September, the Dublin Gliding Club sets off on a safari to the Dingle peninsula with a few gliders and 600m of plastic-coated Parafil cable. The usual launch method is autotow and a good 4x4 is all that's needed to get even a well-laden two-seater airborne.

The DGC is kind enough to share this experience with invited guests and the whole affair is great fun. Rigging and de-rigging, in sometimes near gale force winds as the tide rushes in to swamp you, is challenging to say the least, but it is well worth all the effort. When the mountain wave sets up and the weather is good, the views and the

# SILENT 2



Ridge running on the Dingle peninsula

flying are exceptional. Although most of the flying is done on various ridges, thermals are sometimes abundant and heights of up to 24,000ft have been achieved in wave.

Once the Electro's owner, Nick Bosch, and I had made our way down the twisting lanes to the deserted beach, rigging was relatively easy. The wings are light and all the controls connect automatically. Installing the batteries takes a few minutes and then everything is ready.

#### **Ultralight glider**

Flying an ultralight glider is different. The Electro is very sensitive on the controls and can be quite lively in strong turbulence. The L/D is given as 40 at a rather slow 50kts. The landing gear is retractable and the wheel brake is operated at the end of the airbrake travel.

As one would expect, all the components are made to be super lightweight and a lot of ingenuity has gone into the design. Strength and robustness do not appear to have been compromised. The instrument panel on the particular glider I flew was well equipped with everything imaginable, including an LX Zeus glass display. Switching between a moving map and a 3D flight sim style view of the terrain ahead was a simple matter of

pressing one of the nine buttons on the top of the control column.

So, as I was saying, there I was about to take off... and it could not be more simple. Turn the key in the 'ignition', flick the main power switch to 'on' and twist the power control to max. With a staccato rattle, the motor quickly winds up to 4,500rpm and the glider rapidly accelerates forward.

The first time I took off I had selected '0' flap as advised, but with a fairly strong crosswind it took quite some time before I could level the wings. With the mini taxiing wheels on the wingtips this was not a problem on the firm sand, but might well have become one in long grass.

On my next take-off I used a flap setting of '-1', which gave greater aileron authority and proved to be much more satisfactory. Within 150m we were airborne and climbing at 2m/s. The only things to monitor are the three temperature readings: one for the motor, one for the batteries and one for the FCU, or 'Flight Control Unit'. The accepted practice is to throttle back to about half power when one reaches a safe height of about 500ft. This conserves battery power, reduces the risk of overheat and still appears to give the motor enough power for a

#### **THE BGA SAYS...**

ON THE evidence of this article, the Silent 2 Electro appears to fall into the proposed national deregulated airworthiness category, with a maximum weight of 315kg, including a ballistic recovery system.

The BGA will be working with the CAA on the introduction of nationally registered ultralight sailplanes and ultralight powered sailplanes in the UK. By the time of publication we may know the result of the CAA proposal to de-regulate the airworthiness of some single seat microlight aircraft.

We see the sailplane (self-launching or sustaining) versions of these micro-light aircraft – regardless of any potential deregulation – as similar to self-launching sailplanes, but need to consider, for example, launching systems and how best to integrate these safely into BGA operations and sites.

Clearly safety is paramount, and to this end compatibility with the existing operations, including airworthiness, launching, and flight practices such as seemingly straightforward issues as circuit flying need to be considered. In our present view any powered sailplane needs a minimum aerodynamic performance to establish operating compatibility with the majority of sailplanes flying at BGA sites. The Silent, for example, operates successfully at gliding clubs elsewhere in Europe.

**Pete Stratten**

# ELECTRO



Approaching to land on Inch beach

↳ gentle climb. If you fall out of a thermal, just twist the knob and up you go again. When you want to close down the engine just turn down the power, flick the switch to 'off' and the prop stops and automatically aligns itself horizontally and folds back against the fuselage. If you need power again it's there for you, almost instantly.

The makers claim that a full charge will give 12 minutes at full power or 45 minutes flying straight and level. To charge the batteries fully takes about two and a half hours and is best done with the batteries out of the glider. The Electro comes with a very sophisticated charging system, which when not in use packs away into a purpose built

valise, which is secured to the parcel shelf behind the pilot.

De-rigging takes only a few minutes and everything packs away neatly into a purpose built trailer. As one would expect with an electric motor, maintenance is minimal. Occasional removal of the propeller boss and inspection of the folding prop mechanism is advised.

This category of aircraft is currently under review by the CAA with the expectation that it will be accepted for general use in the near future.

■ Full details of the Silent 2 Electro can be found on the company's website at [www.alisport.com](http://www.alisport.com)

## **ALL THE COMPONENTS ARE MADE TO BE SUPER LIGHTWEIGHT AND A LOT OF INGENUITY HAS GONE INTO THE DESIGN**



Paul Conran lives in Ireland and London. He took up gliding in 1994 and has been competing internationally since 2001. A member Buckminster GC, Paul is a Full Cat and Advanced aerobatic instructor and runs aerobatic courses in UK. He was the UK National Unlimited Champion in 2004, 2011 and 2013