

Seedwings Kestrel

Report by Garry Hume

Spoilt for choice! Gone are salad days when only two hang glider companies made gliders worth considering for the average British pilot. Rumour or Magic sir? (Yes, I know that was a long time ago!). The choice now is fantastic, with high quality, certificated, safe gliders to suit every taste and ability level.

Seedwings was a well known US marque even in those far off days and was the first to use the elliptical wingtip planform now so fashionable. Very few were ever imported into this country. Seedwings Europe I believe now operates, as a completely separate company, from a small, modern factory base in Austria.

So who is the Kestrel designed for? The brochure pushes 'quick and easy set-up', 'light weight, appreciated by female pilots', '27 - 97km/h speed range, for transitional pilots and advanced pilots seeking stress-free fun.' I'm not sure about the translation into English, but I know what they mean.

first impressions

The Kestrel may be billed as an intermediate, but it doesn't look anything like one at first glance. With a Mylar-matrix reinforced leading edge, 80% double surface over the whole wing, elliptical tips and a clean, tight sail with minimal twist, this is a sleek-looking bird of prey. Indeed it looks as if it may be a bit too hot for the 'transitional pilot', or what we would term an intermediate pilot.

build quality

The frame is very well built, with everything neatly fitting: no slop on the control frame, aerofoil uprights, moulded plastic A-frame corners and a speed bar. The sail was beautifully cut without a wrinkle in sight - some larger manufacturers of both flex-wing and rigid gliders could take note and build with the same level of craftsmanship.

The outer bag fitted well (again, many major manufacturers fail to manage this simple task) and was unusual in that it doubled as both a normal and XC bag. It fulfilled both functions and there was plenty of separate padding to prevent wear and tear in transit. The batten bag was especially well thought out, keeping the battens separated neatly into port and starboard sets.

Niggles? Yes, but easily addressed by the manufacturer, and they are really design rather than build-quality related. The cross-tube tensioner has no safety catch; the same fitting on the nose uses a rubber washer in this role. It relies on a 'keyhole channel' and positive tension when rigged to prevent enough slack to allow the fitting to slide into the wider part of the channel. In my opinion this is just not good enough. Whilst it works, truck towing accidents in the States (with other makes using a broadly similar design) indicate that if unusual, non-flying loads are applied it is conceivable that the catch could be dislodged, such as when manhandling the glider through rough rotary air behind a cliff take-off. Having said that, given normal care in ground handling I was happy to fly the glider. The bottom bar also has no internal safety wire. It may have less bend than most similar bars, but again I see this as an easily-cured omission.



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rigging

The Kestrel 158 I was testing came as a rig-on-the-A-frame-only version. As readers of my reviews will know, I do not favour this limitation in our glorious, light wind, Alpine climate. Thankfully the Kestrel can be ordered with a sliding box, allowing flat rigging without compromising the glider's safety or handling. One very well known manufacturer, until recently, took the expedient decision to move the uprights forward. It worked in that you could rig it flat - but you couldn't land it safely in nil wind - duh! The Kestrel does not suffer this unforgivable 'latin' problem.

One rather gusty and windy day I came close to breaking the Kestrel, when a gust pushed the glider several feet just as I spread the wings on the A frame. Yes, in my opinion a glider that cannot be laid flat in Britain is just plain silly. You can get round the problem by enlisting help to lift and drop the glider, the helper partially de-tensioning the cross-tubes,

which I was forced to do on two occasions. If you fly windy, exposed sites go for the rig flat option - you know it makes sense!

Everything is straightforward to rig, though the curved tips add extra time and take a few goes until the knack is learnt. They then become easy to tension (but do not let the carbon tip spar slip behind the tensioning device - it took two people all their strength to get it back out!) The huge bonus for many pilots in this type of design is the reduced packed length. It is easier to carry on the car, especially if faced with draconian European overhang restrictions, and more importantly it fits into most garages - including mine! The Kestrel rigs and de-rigs no quicker than any other kingposted, advanced glider, with 20 curved battens, six undersurface battens and the bendy tips, though it is 5 - 6kg lighter (and easier) than topless competition wings.

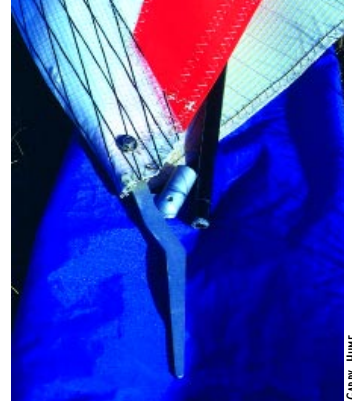
Other neat touches are simple-to-change (without tools) uprights, breakdown



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The Kestrel is ideal for power

leading edges and a detachable rear keel for power flying. Finally, it has very high kingpost hangpoint without a spreader bar - more of which later.

flying

Take-off proved a breeze. The balance is very neutral, with minimal slack in the side rigging. Crosswinds, turbulence, light and strong winds were all easily handled.

The trim speed was set to just above stall speed, just as I would set it for easy thermalling, with the need to pull in slightly whenever low or in rougher air. For less experienced pilots, max. glide would be a safer setting but I noted the adjustment was already on the furthest forward point.

The pitch is very, very light but with a positive feel - as you would expect from such a high hang point. In fact it felt very similar to my Kiss fitted with a Pitchy (a mechanical device common in the 80s that effectively raised the hang point). The stall was easy to feel - and handle in a straight line. Roll too seemed light and fairly quick to initiate, even though I was at the bottom end of

the weight range for the 158 size. Curiously, I was right at the top end for the smaller 148 size, despite being what I would guess is a pretty average pilot weight of 12 stone.

The Achilles heel in the handling, for low airtime pilots, became apparent as I explored the Kestrel's envelope. A number of subtle features mean this glider will suit the more experienced pilot and stronger thermal conditions.

The elliptical tip design appears to offer less washout at the tip; the glider has noticeable anhedral and the sail is tight and flat with (I guess) fairly stiff outer leading edges. These features give a glider less spiral and roll stability. Just as I found with the Laminar with broadly similar features, once cranked up it wants to stay there. Push out (very light and quick pitch response) and the turn quickly tightens. Great for coring a tight, rough thermal but not ideal for a low airtime pilot. Both the Avian Rio and Wills Wing Eagle will tend to flatten-out if you push out in a turn without roll input - just what the low airtime pilot needs to avoid a mistake becoming a full-on drama. In weak thermals high-siding was required, especially when flying slowly.

This means that if you are top landing a small, tight area and you are used to a sweeping curve to get it in, start putting in opposite roll a lot earlier than you would expect. Paradoxically, quick changes to direction were easy if the glider had not yet 'established' in the turn. The lack of a spreader bar on the hang loop would not help here either.

Otherwise, the handling is delightfully precise, with excellent straight-line stability right up to 50mph plus, with pretty good energy retention. Within my first hour on the glider I was happy to fly fast and close to the hill for the camera, in reasonably smooth conditions. It is far more precise and stable than, say, a Magic 6 in this respect.

Landing was easy with a large flare window. The Kestrel was also docile under tow and can be aerotowed or flown under power. Unfortunately my planned aerotowing at the recent Scottish meet was blown out, so I didn't have a chance to test this aspect. The DHV test report states it is easy with no vices - certainly it is a very easy glider to fly at speed, with no adverse yaw noted.

It is an ideal wing for the power pilot who wants to go places, even if there is a bit of wind. Despite a good turn of speed and energy retention, the

very docile take-off and landing characteristics give great confidence. My first take-off under power was in a 3mph, 30° crosswind from a beach - easy with no drama, using an old Mosquito. The landing was nil wind on a narrow strip of beach (the tide had come in a long way!), and was easy in pitch though, perversely, seemingly stiffer in roll with the extra load, making quick course adjustments a little slower than I would like. I did try looser batten strings to speed the roll reversal but this made no appreciable difference. On the plus side, if a wing is lifted by a gust it is much easier to counter than on, say, a Java.

conclusion

Seedwings claim the Kestrel is suitable for the 'transitional' pilot, but this depends on your definition of the word. I would not call this an intermediate glider in the 'I've got ten hours on an old second-hand Clubman, now I want a modern glider' sort of way. Rather, I see this as a true sport glider with easy landing characteristics, filling the gap of the old Magic 6 (a detuned Kiss) and competing with current models such as the Wills Wing Ultra Sport, Airwave Sportster, etc, but not quite so hot as the Scandal, Java etc. In my opinion a pilot should have 50 - 75 hours plus on a true intermediate before moving up to this glider.

Build quality is truly excellent and it looks great. Downsides are the missing safety catches on the nosewire/cross-tube fittings (which Seedwings could easily fix) and the roll characteristics that are, in my opinion, optimised for Alpine strong thermal flying; I think the glider's appeal could be widened further with less anhedral, a little more twist and slightly lower sail tension. But if my experience with the importer is anything to go by, expect excellent, customer-focused, friendly yet professional service, trying that little bit harder to provide the best backup. Many other companies could take note.

importer's comment

My thanks to Garry for the report. Along with him I'd recommend that a pilot has minimum of 50 - 75 hours experience before moving onto the Kestrel.

With regard to comment to the keyhole tension fitting, having witnessed some of the extreme tests Seedwings put gliders through I personally am happy with the system. Seedwings will however supply a locking clip for anyone who has reservations on this point.

Regarding flying under power, the Kestrel's appeals are its take-off and landing characteristics, coupled with the sink rate and stability at speed. Garry noted the glider felt stiffer in roll on his first flight with Mosquito power. This is something I have noticed on all the wings I've flown prone under power: the ability to weight shift in roll is slightly impeded by the extra weight of the engine behind the feet and the effect of torque.

DAVEY JONES, UK IMPORTER

technical specification

Model	148	158
Sail area (m2)	13.85	14.60
Span (m)	10.25	10.40
Aspect ratio	7.6:1	7.4:1
Packed length (m)	5.15	5.25
Short-packed length (m)	3.90	3.90
% double surface	82	85
No. of battens	21	27
Flying weight (kg) (includes packing but not bag)	28	30
Certificated pilot weights	68 - 98	70 - 110
Certification	DHV	DHV
UK price	£2,795	£2,795

UK importer: Davey Jones, 5 Maelgwyn Drive, Deganwy, Gwynedd LL31 9UY, tel: 01492 582589, mobile: 0795 7888 475.
E-mail: dave@deganwy.fsnet.co.uk website: www.tirol.com/seedwings



PAUL MADDEN

ratings

Rigging flat	▲▲▲	Possible with a friend - go for the flat-rig option for hill flying
Rigging on the A-frame	▲▲▲▲▲	Simple, but tip rods add a little time and hassle
Ground handling	▲▲▲▲	Excellent - minimal slack in the side-wires
Take-off	▲▲▲▲	Balanced and forgiving
Landing	▲▲▲▲	Easy in pitch but beware tight turns near the ground
Sail	▲▲▲▲▲ ++	Couldn't find a wrinkle - better than most
Frame & fittings	▲▲▲▲	Poor tensioning catches prevent a 5 but build quality is faultless
Straight-line stability	▲▲▲▲▲ +	Score says it all
Spiral stability	▲▲▲▲	High-siding required in weak thermals
Handling in roll	▲▲▲▲	Light and predictable in gentle turns - more reluctant to reverse when tightly-banked
Feel in pitch	▲▲▲▲	Light and positive from near stall to 50mph VNE
Performance	▲▲▲▲	Excellent sink rate - I could stay near the top of the stack
Value for money	▲▲▲▲	At £2,795 a quality bit of kit
Overall	▲▲▲▲	Worthy competitor in a tough market - loosen the roll Seedwings for a 5