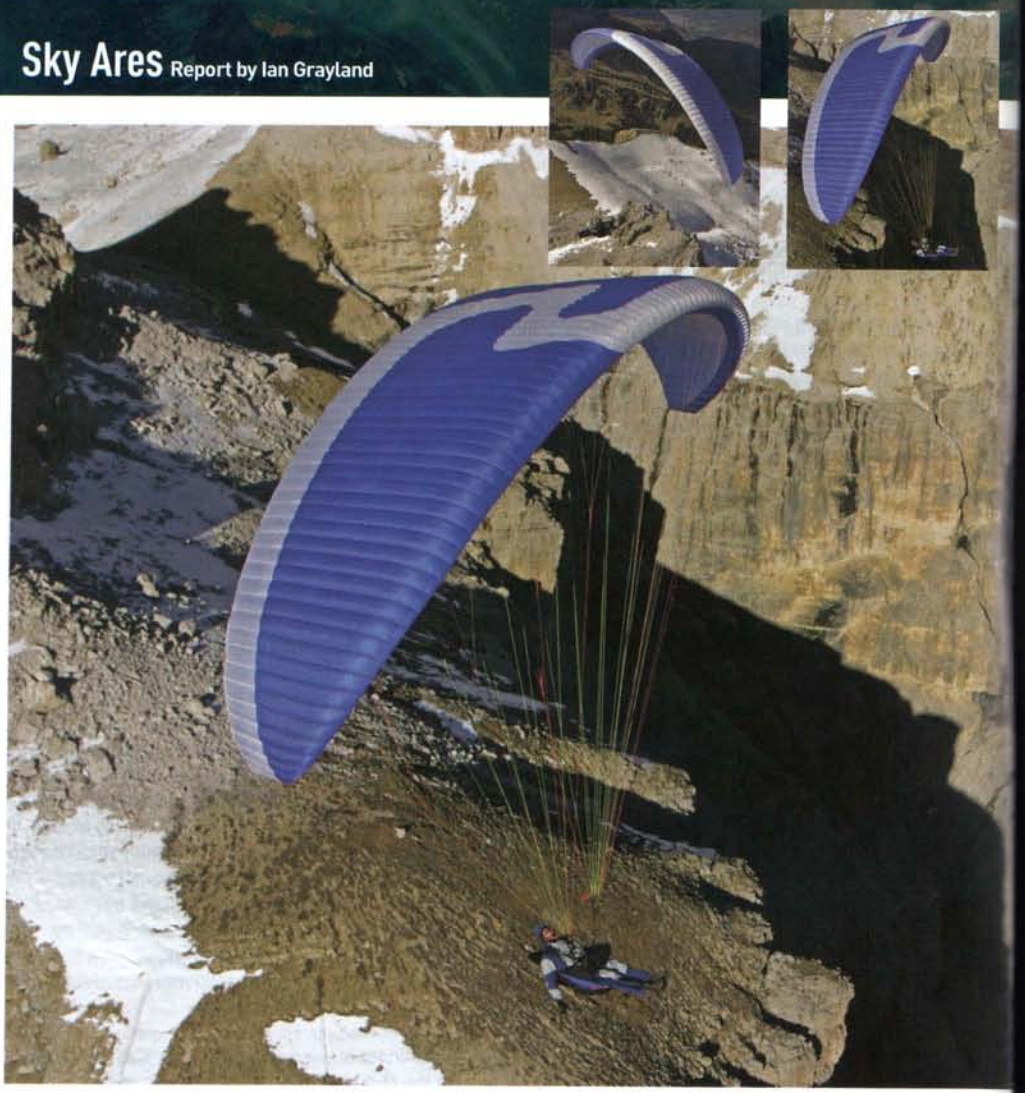
Sky Ares Report by Ian Grayland



"Air-Ease? Wossat then?"

"It's Sky's new performance glider, the Ares. They've been working on it off and on for a couple of years and now it's fully certified and in production. Have a go and let us know what you think." Thus, over 43 flying hours ago, began one of the longest flight tests in paragliding history...

The bag felt very light, even with the weight of a T-shirt and a big bundle of brochures inside, and this was in comparison with my own small, light glider. Then, when I laid it out for the first time, I had to rush round to the front to check that the AFNOR certification label actually said "Medium: 80 - 100kg" and "Performance". The wing was small, I mean really small. And the cells. There were so many of them. And they were tiny!

In fact the Medium Ares has 77 full-chord cells, an aspect ratio of 6:1, and a flat wing area of 23.8 square metres. That is the same aspect ratio as my trusty old Avax comp wing, but with two more cells plus 5kg more pilot weight... and it's over two square metres smaller!

Construction and materials

Part of the reason for the light weight is the use of Porcher Marine Skytex 9017 for the skin of the wing. Water resistant E77A is used for the upper surface and E38A for the lower. Rib material is the same but with the E29A finish. A combination of light fabric, small area and minimal internal clutter results in a weight of under 5.5kg.

Construction is simplified with ribs laid out in blocks of three using diagonals from the top of the centre cell. There's still a lot of production work here from the sheer number of component parts. Internal tension straps are used to stop the cells flattening between rigging groups and run full-span on the Ds to prevent "accordion" instability under partial braking. Rigging is Edelrid throughout, polyester-sheathed Dyneema core for the upper cascades and Aramid core for the mains.

The line set uses a short single upper cascade with four main lines per side to four risers via Maillon Rapide quick links. The 20mm risers are usefully colour-coded and easy to handle, but sadly fitted with the usual line-eating magnetic brake retainers common to so many manufacturers (why do they all do it?). The brake handles themselves include a neat additional finger grip for those who like to put their hands right through - if they'd included removable main stiffeners these would suit almost any pilot.

The standard Sky rucksack is a single-zip type with adjustable top cover and triple compression straps. It has plenty of room for the largest of harnesses and all your sundry kit and spare clothing. With the harness inverted the load is supported high and comfortably through the waist strap with no shoulder strap tension. Quite simply, the best I have used.

Build quality

The quality of construction is good enough to be seen from several yards away. No creases, no misalignments, no lumps. When you get up close and start really looking it gets even better. Every panel has a part number and a plethora of assembly index-marks which line up just so. The stitching is dead even, with consistent thread tension and back-stitched stops. Reinforcements are triple zig-zagged, as are the fabric edge-tapes. By now you'd not be surprised if the wing tips were fitted with velcro openings for internal debris removal - and of course they are. The leading edge rib-stiffeners even have lightening holes on the intermediate ribs!

On the ground

Inflation and launch is easy for a wing of this class. Even if you horseshoe it by pulling it up too fast in very light air, the wing quickly inflates and pops into shape without any real intervention. Forward launches need a good layout, as for most high aspect-ratio wings, though split As might have helped here. As the wing fills it accelerates evenly and quickly, but has little tendency to overshoot once overhead.

Though no unusual techniques are required, with lightweight wings like the Ares I have found it best to lay out the wing crosswind and stand on a wing-tip whilst getting into the harness in typical UK winds - so no surprises for me here. Also, I occasionally use asymmetric inflations in very strong winds, but this is more a matter of choice than necessity.

Handling

On take-off the immediate impression is of a high-span wing with loads of roll feedback coming through the harness, so much so that you might imagine the wing would wind up in turns following a sluggish entry. Pulling a brake handle for the first time dispels that idea. The control force is light and progressive, the response is immediate and the turn near-instantaneous. With its flattish centre section and progressive bow, unlike some other Sky gliders, the Ares has no inherent tendency to overbank and requires little holding off on the outer brake. Except, that is, for one minor, er, problem - the Ares is so agile and energetic and so much fun to turn that even the most conservative of fliers will end up standing it on a wingtip at every other turn! Better yet, if you overbank it on purpose (why would anyone want to do that?) and then level up, the resulting zoom climb will have your boots off!

Brake travel plus slack puts your hands well down by your backside at the stall. The control force, so light throughout most of the normal flying range, now becomes reassuringly solid. Total travel is short enough to allow most top landings to be made with the brakes alone, even with my short arms and low hang points. Back in flight, applying an armful of brake on one side has the wing peeling back evenly from the tip and recovering quickly as the brake is released, though there is absolutely no need to resort to this sort of technique for fast turn entry.

Roll control through the harness is very sensitive, requiring little movement or effort. Once established in a turn most changes are made instinctively through the harness, only using the brakes for pitch - flying literally by the seat of the pants. Feedback is so good that it is easy to feel the slightest differential loading of the risers, leading to some very pleasurable flying in gentler conditions and eking out the last foot of height.

However, it is in small, fast-moving thermal bubbles where the Ares really shows its mettle. The combination of high agility and feedback allows you to work the tiniest of cores, climbing up the inside of most other wings with ease. The high trim speed carries you through the sink in broken lift while the rapid turn response and superb energy retention lets you maximise any surges. And with light control forces, both through the harness and the brake handles, you can keep it up for hours without fatigue - truly effortless.

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Specification

Model	S	M	L
No of cells	77	77	77
Span (projected, m)	9.26	9.55	9.86
Area (flat, m²)	22.35	23.80	25.35
Aspect ratio	6:1	6:1	6:1
Line diameter (mm)	1.0/1.5/1.8	1.0/1.5/1.8	1.0/1.5/1.8
All-up weight range (kg)	65 - 85	80 - 100	95 - 120
AFNOR certification	Performance	Performance	Performance
Guarantee	3 years materials and workmanship		
Price	£2,300	£2,300	£2,300

Performance

The best glide ratio is probably just over 9:1 on the Medium and maybe 9.3 on the Large (hard to measure, other than by direct comparison and pure feel against other wings). Trim speed is fast - around 40km/h. The wing really moves around the sky, only outpaced by the occasional full-on comp glider. The Ares glides well at trim speed and gets up to about 52km/h on the bar, so penetration performance is excellent. Full speed was not available with my set-up, but I'm fairly sure Sky's claimed 55km/h would be easy to exceed.

On the descent, single-line big ears are surprisingly effective (considering there are four A lines) and give around 450ft/min sink with a slightly elevated trim speed, though there are no split As and you have to grab the lines manually (ugh!). Weight-shift control in big ears is effective and effortless, with or without speed bar applied.

Stability

Pitch stability is very good, in sharp contrast to many other wings with high agility. There is no tendency to pitch back or surge forward in turbulence within the glider's broad speed range. In short, it is easy to keep the wing overhead in rough air. You can easily get an idea of this in smooth air by exiting spirals with no bank and monitoring the resulting zoom climb and well-damped surge. Roll stability too is exemplary, with no sudden transition from tight turn to spiral dive, making it easy to alter bank and rate of descent and exit as smoothly and gently as required.

Asymmetric collapses induced at trim speed require no recovery action to produce a smooth reinflation in about half a turn. There is little tendency for the live side to surge forward diagonally, the biggest surge being after the wing reinflates (again requiring no pilot input).

Bad experiences with the Ares? Yeah. The worst bit was when the review glider went back, leaving me with no Ares. Despite flying several other very good gliders, I suffered intense withdrawal symptoms. After flying the Ares no other wing feels quite the same anymore. I'm doomed!

Summary

The Ares is intended for experienced pilots who want a wide speed range and good glide. If you are looking for a competitive, Performance class glider with light control forces and real agility, grab yourself a demo Ares - you won't be disappointed.

Handling, energy retention, effortless climbs.

No split As, magnetic poppers, fixed stiffeners in brake handles.

Importer's comment

Sky tell us that the Ares is for "Experienced pilots looking for high performance." The design brief was to produce a glider capable of being competitive in national XC comps whilst retaining a high level of safety and slick handling. The new high-wing-loading design and new cloth-cutting software, coupled with Sky's close working relationship with cloth manufacturer Porcher Marine, have produced a very different kind of wing. Small, fast and agile, yet with stunning performance and a high level of safety for this class of glider. I am extremely pleased that the Ares has stood up to Ian's very knowledgeable and critical eye with such flying colours, because I know that if Ian didn't like any aspect of the wing he would certainly say so.

TIM KING, SKYLINE UK

Ian Grayland

Ian's introduction to flying was as a schoolboy in the ATC. He taught himself to fly hang gliders in 1973 on a home-built wing of his own design. This and its later derivatives flew well enough to get him involved with glider development at HiWay in Brighton in the exciting early days of the sport. When HiWay moved to Wales in 1978 Ian stayed in Brighton, founding Vulturelite to produce the Emu and later Southdown Sailwings to manufacture the Sigma and Lightning. His last manufacturing venture was Aerial Arts, where he developed the lightweight Clubman and, following CAA approval as a designer and test pilot, the Chaser range of microlights.

In 1990 Ian switched his attention to paraglider design and became hooked on this form of free flight, once again having learnt to fly on his own home-built wings. Ian is currently Safety Officer for the Southern Club where he flies roughly 200 hours per year on an average of 20 different gliders.

The test was flown with a UP Fast harness, carabiner stirrup and front reserve, with the chest strap full slack. Instrumentation by Brauniger and Garmin. Sundry lead sheet brings Ian's all-up weight to around 97kg.