

K1

Singlehanded sailors who want dinghy performance combined with keelboat refinement should take a look at the unique new 15ft K1, **Jeremy Evans** took one for a spin.



Specifications

Designer:	Paul Handley in 2009
Length:	4.57m
Beam:	1.3m
Draught:	0.2m-1.15m
Hull weight:	50kg fully fitted
Keel weight:	60kg
Sailing weight:	125kg
Construction:	Vinylester resin infusion laminate
Trail PY:	1060
Builder:	Synthesize Yachts
Sales:	Vandercraft
Class:	www.k1sailing.com
Price:	£5,990

Paul Handley is designer of the best-selling Feva, Tera and Q'ba rotomoulded plastic dinghies, as well as the k6 two-person keelboat and RS100 singlehander. But for personal relaxation, Paul enjoys a rather different style of sailing with the 1960s wooden Firefly that he has raced on and off for the past 16 years. What's more, Paul likes to follow the example of 1948 Olympians, by club racing his Firefly singlehanded on summer evenings. That gave him the idea of designing a completely different style of singlehander to the Lasers, Solos, Phantoms, Blazes, Streakers, Finns and many other solo classes that are so popular at sailing clubs around the UK.

Paul's new K1 is a miniature keelboat, held upright by a 54kg lead bulb dangling beneath the hull. At 15ft overall, the K1 must surely be one of the world's smallest keelboats and by Paul's reckoning is the lightest. The bulb weighs more than the fully fitted hull, providing an exceptionally high ballast ratio, while the K1's all-up sailing weight is less than a Finn.

Unlike most singlehanded dinghy classes, the hull of the K1 is slim, sleek and curvaceous. The sail plan is a development of Paul's experience in Fireflies, with the loss of one crew offset by the weight of the keel. Using a jib is almost unique among singlehanders – apart from an International Canoe – but provides additional power low down where it's needed for a singlehanded crew, as well as pulling the bow round in tacks, accelerating airflow over the leeward side of the mainsail, boosting offwind performance and making the boat more interesting to sail without the hassles of hoisting a spinnaker.

Unlike the SRD (self-righting dinghy), which Mark Giles designed as a twin crew, 16ft dinghy hybrid fitted with a keel, the K1 is a pure keelboat. All good dinghy sailors know they must hold the boat upright, which in reality means an optimum heeling angle of no more than 10-15 degrees. If a dinghy heels further, righting moment diminishes as crew weight moves over the centre of buoyancy, with progressive loss of control leading to capsize at more than 45 degrees. By contrast, the slim hull of the K1 is designed to heel from 15-50 degrees, with a progressive increase in righting moment and reduction in rig power. Waterline gets narrower as the boat heels, reducing drag and increasing speed, with Paul calculating that 25-30 degrees should provide optimum performance upwind.

Rigging and launching

Paul Handley delivered the pre-production K1 to Cobnor Activites Centre on the shores of Chichester Harbour. Changes to production boats are likely to be limited to cosmetic tweaks to the sails. With less overall weight than a Finn (and a lot less cost), the K1 is as easy to tow on a trailer as any dinghy, with the additional advantage of very narrow beam. Alternatively, it's possible to take out the



keel and carry the ultra-light hull on a roof rack, though that would surely require a two-part mast.

Selden's tapered carbon mast is feather-light, making it easy for one person to lift and lock inside into the deck plate (anodised aluminium on production boats) and attach the shrouds. Adjustable rig controls include jib luff/rig tension to rake the mast, with cunningham and kicker to bend the mast, managing camber and twist to power up or depower the mainsail, plus the option of fine tuning spreader angles in the boat park. In addition, the self-tacking jib has a carbon sprit with its own miniature kicking strap at the tack, controlling clew height to open and close the leech or foot. The optional jib furler would be useful, providing one more string for the skipper to pull. Thanks to the narrow hull, all of these controls can be tweaked from the middle of boat, with no clutter of lines on the side decks.

I was amazed how easy this small keelboat is to handle in a boat park. Compared to an average dinghy, a little more effort is required to slide boat and trolley off its trailer with a bulb protruding under the hull, but the K1 feels light and beautifully balanced as you push it around on wheels. For sure, you need a proper slipway or reliably hard surface. The K1 is not designed for launching over shingle or soft sand and certainly not for a shorebreak! Paul explained that it would be ideal to launch with sails down, then hoist (or drop) the mainsail with the K1 moored alongside a pontoon and keel fully down. This facility is widely available at sailing clubs on lakes, reservoirs and estuaries, with Datchet, Grafham, Rutland and Salcombe springing to mind as ideal

locations for the K1.

Without the luxury of a pontoon, we discovered the K1 is also fairly straightforward to launch and land with sails hoisted, as if it were a dinghy. You have to push the boat in a little deeper – approximately to the top of your thighs – to float the bulb clear of the trolley, then stand by the windward shroud to lower the keel halfway. A 6:1 tackle is clipped to a line on the front of the mast, effectively reducing the weight of the keel to 10kg. When not in use, it's simply unclipped and left in the bottom of the cockpit.

Half keel provides enough foil (moulded in epoxy foam like a daggerboard) to hop on board and sail gently out into deeper water, before lowering the keel to its full depth. Coming back to shore, you just reverse the procedure.

There is no locking mechanism. Hefty rubber shims on the leading and trailing edge of the head ensure the keel will not move inside its box, unless you are unfortunate/silly enough to hit the bottom at speed when the rubber shims are designed to act like shock absorbers.

On the water

When designing the K1 Paul had to make a decision, 'Is this a keelboat for people who want to sit in or sit out?' He went for the latter option, on the basis that most sailors like to get some exercise, plus it's dryer and more efficient to drive from the side.

Stepping into the cockpit from a RIB (or pontoon), the massive amount of weight at the base of the keel makes the K1 feel resolutely stable and user-friendly, despite a narrow waterline with little more than 4ft maximum beam on deck. The mainsail is sheeted 'skiff style' straight off the carbon boom, but the K1



FAR LEFT The mainsail is sheeted 'skiff style' straight off the carbon boom, but the K1 has a keelboat 'feel' when sheeted in and slicing upwind.

LEFT TOP The K1 shows no inclination to go right over and pops back upright – if you heel it past 50 degrees, it just turns up into the wind.

LEFT BELOW The K1 handles like a dinghy in the boat park, but does need a solid slipway (or pontoon/mooring buoy).



does not feel like a dinghy when you sheet in. It just wants to heel and slice upwind, with the rudder staying light and precise at 30-plus degrees. You can let the K1 heel until the leeward gunwale touches the water, without loss of upwind performance. Beyond that, either ease the mainsheet or luff through gusts with windward telltales lifting.

Compared to the hardcore horrors of hiking a Laser, getting weight outside the K1 felt positively relaxed, with a smooth roll on the side decks allowing your legs to drop down into the cockpit, instead of ▶

BELOW The self-tacking jib has a carbon sprit with its own miniature kicking strap at the tack, controlling clew height to open and close the leech.





being stretched across an unforgiving horizontal deck. You could hike comfortably on the K1 for extended periods, but if things get too physical the solution is to bend the carbon mast to flatten the mainsail and bleed power off the leech, using the jib to power the K1 upwind in a strong breeze when you can sit comfortably on the side deck with a clear view ahead.

We had little more than Force 3 during our test session, which was not enough for any fast planing. Paul assured us the K1 would overtake its bow wave and fly with a little more breeze, both reaching and running when the jib-sprit becomes an effective weapon for goose-winging downwind. Controlling the self-tacking jib and its mini-kicking strap took a little getting used to and felt considerably better on a second session, indicating

that K1 sailors will work out their own style of boat handling. It certainly made the K1 fail-safe and predictable through tacks and gybes.

What about capsizing? The simple answer is that the K1 shows no inclination to go right over and will inevitably pop right back upright! If you let the boat heel past 50 degrees, it simply turns up into wind, helping to ensure you can make a total mess of a gybe and survive. Any water inside the cockpit disappears rapidly through a simple drain hole.

A new type of singlehander?

It seems Paul Handley may have found a niche market. Fifteen K1s had already been sold when we tested the pre-production boat in April, bound for inland clubs including Chew Valley, Oxford, Datchet and Rutland, plus four at Lyme

Regis where they will enjoy open sea sailing, encouraged by Jeff van der Borgh of Vandercraft who is marketing the K1. Three K1 buyers also own Flying Fifteens - Uffa Fox's classic 15ft planing keelboat for two crew - indicating the unique attraction of this new singlehander which looks like a 'dinghy.'

How will the K1 perform against real dinghies? Paul Handley's own club racing results place it somewhere between Lasers and Phantoms. The drag of the keel is a disadvantage in drifting conditions, but waterline length and an efficient rig help the K1 hold its own racing in light winds of 3-8 knots. In stronger winds, the K1 provides displacement sailing upwind and planing offwind, including the big advantage of being able to plane on a direct run with the jib goose-winged. Easy gybes with little chance of capsize should be a benefit handicap racing in a blow, when



dinghy sailors have all kinds of stability problems around the course.

The K1 felt beautifully balanced, totally forgiving and absolutely delightful during our test session in light-moderate winds. It's quite unlike any other small boat on the market and a tribute to Paul Handley's ability to think differently, with the added benefit of a keen price for such a refined sailing machine. All that's missing is a view on the K1's performance in Force 4-5 with waves. I suspect it will be feisty, fun and well behaved, but that delight will have to wait. ■

ABOVE The jib-sprit doubles up as a tool for goose-winging downwind.

ABOVE Room for two if you choose...

ABOVE RIGHT A jib is rare on singlehanded designs, but it provides additional power low, as well as pulling the bow round in tacks and boosting offwind performance.



RIGHT TOP The K1 can be towed on a trailer like a dinghy, or even take out the keel and put the ultra-light hull on a roofrack.

RIGHT The tapered carbon mast is feather-light, making it easy for one person to lift and lock into place inside the deck plate.



Firefly

The Firefly was designed by Uffa Fox in 1946 and raced as the singlehanded dinghy class at the 1948 Olympics, after which the Finn took over. Old Fireflies, with cold moulded wooden hulls built by Fairy Marine, have been superseded by glassfibre Fireflies with an updated deck design by Rondar. Second-hand prices for race-ready boats start at under £1,000.

Length: 3.65m

Beam: 1.4m

Sail area: Main 8.36sq m

Jib 2.52 sq m

PN: 1162

www.fireflysailing.org



Illusion

The Illusion is a one-design keelboat designed by Jo Richards and Neil Graham in 1981, based on a scaled-down version of the British 12-Metre yacht 'Lionheart'. The skipper sits inside the hull, which can provide a very wet ride. Active fleets are based at Bembridge SC on the Isle of Wight, West Kirby SC on the Wirral and Aldenham SC in Hertfordshire.

Length: 3.27m

Beam: 0.83 m

Sail area: Main 2.82sq m

Jib 2.46sq m jib

Spinnaker 5.61sq m

PN: 1432

www.illusionclass.org

THANKS TO...

Cobnor Activities Centre for providing facilities for this test. Phone 01243 572791 for information on year-round sailing courses for all ages. www.cobnor.com

Answer Back

From Paul Handley

Thanks Jeremy for so clearly identifying the virtues of the K1 - in a nutshell great performance combined with ease of sailing. We would have welcomed more breeze as the K1 planes rapidly offwind whilst remaining forgiving and very easy through gybes - we've posted some video clips to give a feel for this on www.K1sailing.com But the best way to appreciate a K1 is to sail one - Jeff from Vandercraft has a number of test days underway, again details are on the website. The K1 has been really well received by sailors and we are pleased to be delivering the first production boats now with the promise of fleet racing later this season.

www.vandercraft.co.uk