

RS700



Do asymmetrics give you a thrill? Do you love to dangle on a wire? Do you want to race alone? **Jeremy Evans** and guest tester **Lester Noble** report on a singlehanded blast.

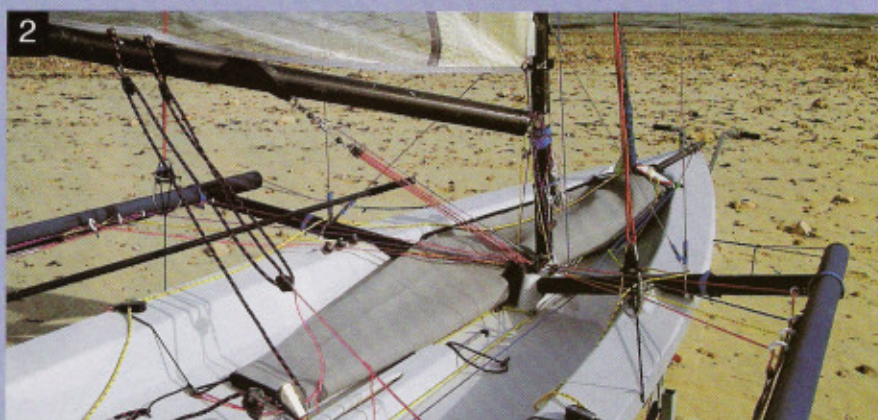
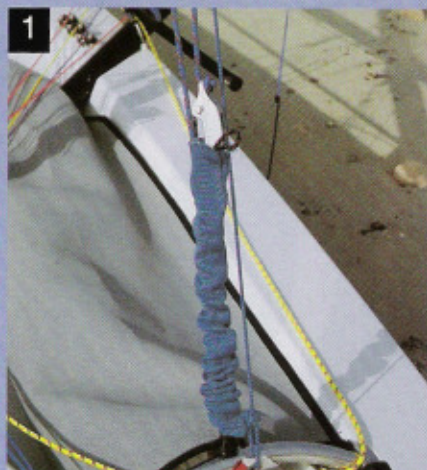
The RS700 was launched at the 2001 London Boat Show with the aim of providing ultimate performance in a gennaker-powered singlehander. While all kinds of variations on the two-up, twin wire gennaker theme followed the Laser 5000, single wire

sailors were left to play with a mainsail until the Musto Skiff provided the chance to go one-up with an asymmetric.

There was already a solitary rocket in the RS600 which kick-started the RS Racing range alongside the RS400. But some sailors wanted to explore the

challenge of single wiring with a gennaker. It was time for RS Racing to provide their own gennaker singlehander.

Nick Peters, who designed the RS700 with Alex Southon at RS Racing explained that the RS600 was not suitable to fit a gennaker to – besides the risk of splitting a healthy class. So, following the development of the twin wire RS800, he felt the time had come for his own in-house design. Basic parameters included a stable hull combined with a cockpit you can sit in rather than on. The advantages of being able to sit down during a spinnaker launch or retrieval were learnt from the RS800.



1. An elasticised sock covers the forestay cleat area to prevent the kite snagging;
2. The spinnaker is kept under tension with shockcord, as are the kicker, cunningham and outhaul.

Nick was also aware of the chaos caused by wrapping the kite, and wanted lots of boat in front of the mast so he could pull the forestay back and launch the kite well clear. This would make gybing easier, as well as creating a simpler and cheaper boat to build due to the bowsprit being in front of the chute. It would also retain the high buoyancy needed for charging through waves.

Rig and Sails

The RS700 has a longer waterline than the RS600, which translates into better potential speed, plus its finer bow is more easily driven through chop. It also has a longer mast and a longer luff on the mainsail, with slightly greater righting moment due to its wider beam.

A tall carbon mast is used to get a high spinnaker hoist point without resorting to upper shrouds, keeping the rig simple with no spreaders creating windage. The hounds are as high as possible to allow the RS700 to carry a big enough kite to give her plenty of power, plus a high flying kite means that the driver can see under the foot.

The RS700 has short battens in its Kevlar-reinforced laminate mainsail, with just a single full length soft batten at the top. This makes the boat easier to manage than the fully battened RS600. However a short batten 'soft sail' requires a near perfect match between luff curve and mast. There's nowhere to hide bad workmanship, but Hyde have an almost crease-free main for the RS700. The short batten sail is also lighter, but not so easy to roll in the dinghy park!

The rig can be depowered by raking it back for stronger winds, which also helps prevent nose diving downwind. Just ease the forestay downhaul which runs through a cleat above deck level, and move the shroud pins down the plates. You then pull in the flattener which raises the boom back to a good working height and loses sail area across the foot.

You also need to rake the daggerboard back to balance the centre of effort and lateral resistance. This is achieved with a daggerboard case that's long enough to let the dagger pivot, and is controlled by securing the daggerboard head either to an aft shockcord that holds the foil

vertical or to a forward shockcord that rakes the tip aft. One small problem is that a high performance boat requires a tight fit between dagger and case, and our experience showed the daggerboard head could work itself back and get a little stuck. Regular burnishing should ensure it slides to order.

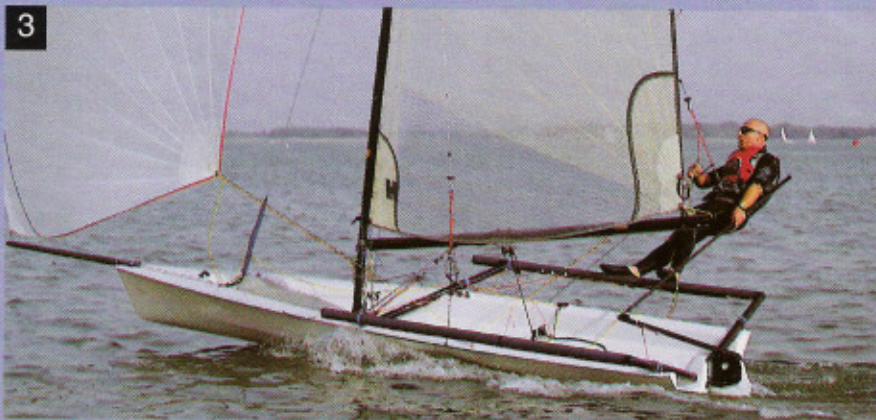
Weight equalisation

A dinghy designed to be sailed by a range of abilities – mid to upper level technique and fitness – also needs to be competitive with a range of weights.

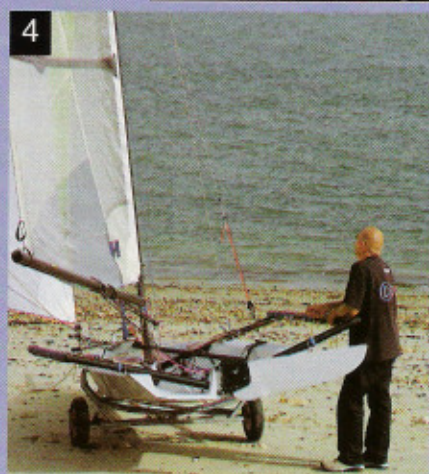
RS use a 33.3 per cent weight equalisation formula that allows a maximum 9kg to be added to the boat, divided between 6kg lead and 3kg 'granny bars' mounted inside the racks at their wide setting, helping fill the gap between rack and boat for lightweight sailors.

Rack settings provide an adjustable beam of 6ft 4in to 7ft 8in, which is decided by the sailor's weight and height. The whole system provides a 27kg equalised weight band for the RS700, which translates into sailors being theoretically equal when they weigh around 65-95kg.





3 It's worth practising helming from the trapeze before using the spinnaker;
4 The racks use aluminium tubes, as carbon can shatter leaving sharp edges in a collision.



Sailing

Our test sailor, Lester Noble, was reassured by the straightforward deck layout. The only uncertainty for the newcomer may be the pump-action spinnaker hoist and retrieval system. Lester felt the pump-action was a necessity for any singlehanded asymmetric sailor, although Musto Skiff owner Kevin Anderson argues otherwise.

Being placed on top of the foredeck, the 700's system is clean and simple so potential gremlins can be quickly dealt with. As with the rest of the RS range, the spinnaker halyard kills two birds with one stone by hoisting the kite and extending the bowsprit. Where this makes the life of the singlehanded sailor easier, is in placing another stand-up pulley on the deck aft of the normal halyard cleat, plus a free-floating pulley attached to a handle on the halyard prior to being directed through a spinnaker rocker cleat. The halyard is then led to the other side of the daggerboard slot, where it feeds through a mirror version of the pump-action assembly before exiting through the sock and chute mouth as standard.

The secret to making the system work is down to an elastic cord connected to a pulley placed on the halyard in between the two pump-action rocker cleats. The elastic is placed under tension, or loosened, by a separate control line. Although this may sound confusing, it is very easy in practice. In order to hoist or drop the kite, the elastic has to be under tension and is only released when the spinnaker is being flown.

One detail worthy of mention is the simple rig tensioning system on the forestay. It is worth erring on the over tensioned side, because the forestay is attached some distance behind the bow to leave the spinnaker chute clear, leaving a relatively small triangle between shrouds and forestay with such a raked rig. To match this the daggerboard can be raked forward or aft in harmony with your rig – another simple but neat detail.

Light winds

Once on the water, we instantly noticed how stable the hard chine and flat bottomed RS700 hull is in comparison to the rounder RS600. The large mainsail

was able to provide enough power to trapeze in mid Force 2, which is ideal to establish correct technique before taking on heavier air. In these conditions you quickly realise that trapezing well forward on the wings establishes efficient trim. As with many of the new high performance dinghies, the R700's rocker line is designed for blasting in planing conditions rather than lifting the stern in light winds.

It took a couple of tacks before we realised that a significant amount of main needs to be released, with the boat spun round past your beating position if getting stuck head-to-wind is to be avoided, although the boat turns easily and without fuss.

Spinnaker hoists and drops were remarkably quick in these conditions. Those who have never experienced the pump-action system will find it easy to master, with many wondering why it hasn't been adopted by two-man high performance dinghies. Trapezing with the spinnaker was not as difficult as you might imagine because the rudder responds positively. We were surprised



how easy it was trapezing without spinnaker sheet cleats, but we think they would be an asset when the driver has to undo rope snags whilst the kite is flying.

In more breeze

In Force 3 Lester needed to start flattening the mainsail as his 86kg became overpowered. This made us think ultimate performance will be milked by heavier sailors of 78kg and above, and we also felt it would pay to be heavy when you're righting the boat after a capsiz. That aside, the half battened mainsail was remarkably tame when the boat was stationary.

As the wind increased, our inexperience in establishing a step-by-step procedure for hooking on to the trapeze meant the time from tacking or gybing to trapezing lengthened. A little more practice with the mechanics would get it logged.

Downwind with the spinnaker in heavier winds – top end of a Force 4 – was exhilarating but not out of control. In fact the stable platform made us wonder if the spinnaker could be even bigger, but all our test rides were on flat water.

Dropping the kite in strong winds wasn't too difficult, but the main is best released before the drop. Making sure the boom is fully out, and that you bear away deep onto a very broad reach, should ensure you avoid any wet surprises.

One detail we were not sure about was the line that controls the elastic tension system. This is directly attached to the downhaul handle dedicated to dropping the spinnaker. Initially we thought this an excellent idea because as you pump the

elastic becomes automatically tensioned. This worked fine, until there were two occasions when we came to drop the spinnaker and found the control line and handle had become twisted and knotted. This in effect shortened the control line and over tensioned the system, so the uphaul side of the halyard re-cleated after being released.

Overall

What if you have never trapezed with a tiller? Well, you don't have to put the kite up on the RS700 until you've got trapezing sorted. It provides a stable platform to learn about the wire in sensible wind speeds and is significantly easier than the RS600.

It also sounds like good value for a boat that is clearly rocket-ship fast. The RS700 has been racing off a suggested PN of 860 which effectively makes it the quickest singlehander round the track and faster than all bar a handful of twin wire dinghies. A cheque for £6,450 buys a 'ready to win' RS700, but you'd probably spend £11,000 adding essentials including a combination trailer, covers and race pack.

With more than 100 boats sold, the RS700 class has a full racing circuit planned for this year, and hopes to double its maiden 2001 national championship where the 20 boat barrier was broken.

Overall, the RS700 is a simple but highly effective high performance singlehander, designed for the experienced sailor who retains a certain level of agility, but also wants to spend his spare time on the water rather than fiddling in the dinghy park.

answerBack by Nick Peters

Director - LDC Racing Sailboats

Thank you
Jeremy
and Lester



for a thorough test. We did not leave a stone unturned in ensuring the RS700 is the best possible product for this market, and it is gratifying to have that so clearly recognised. Lester, I know how hard it was for you to accept that the RS700 is as fast as your asymmetric Canoe!

As the weeks go by the RS700 continues to gather momentum, especially in Europe, with boats sold into Switzerland, Germany, France, Sweden and the Netherlands. As you read this over 120 boats have been sold. We are frequently asked why there are no boats on the second-hand market but the truth is the RS700 is one of those rare product that exceeds expectation.

An Integral part of the RS Racing Circuit, the RS700 class has a full UK circuit, the Nationals at Weymouth, and a three event Eurocup including a full week at Garda in store.

This Winter has seen some club fleets grow. Hayling (21 boats), Lymington, Stokes Bay, Queen Mary, British Steel, Mumbles and Draycote are notable. The enthusiasm is infectious!

Singlehanded sailing has moved on, and asymmetric spinnakers are here to stay. At last real round-the-track performance is no longer the preserve of two-man boats. The RS700 makes this style of sailing truly attainable. Don't delay!

Specifications

Loa:	4.68m
Beam:	1.92-2.33m
Sailing weight:	79kg
Sail area:	main: 12.8sq m
	gennaker: 16.0sq m

Price inc VAT: £6,595

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