

Raising the Mast

Position the boat head to wind, away from any overhead power lines or other obstructions.

Lay the mast along the centre line of the boat.

Un-tape all the ropes attached to the foot of mast.



- 1 Attach shroud adjusters to the shroud eye each side - approximately the 5th hole down. Subsequently, you can attach at the captive pin on the base of the plate.
- 2 Fix the base of the mast to the mast step on the cross beam with the pin and ring from the mast step.



Ensure all Halyards are in place at foot of mast.

- 3 You may now pull the rig up using the forestay. You may require someone to help lift the top of the mast.

- 4 Having pulled the mast upright, secure the forestay around the black furling bar.



- 5 Attach lowers in to the adjuster plates and tie off on each side of hull.
Ensure all Halyards from mast are clear and not twisted or snagged.

Attaching the boom and gnav

- 7 Attach the boom onto the mast with the pin on the lower of the two fittings. Remember to put the pin in from the top and replace the split ring to stop the pin coming out. These will be replaced with drop nose pins.



- 8a Next attach the strut to the upper fitting on the mast. Ensure the toggle is correctly orientated. [See Selden info sheet](#).



- 8b Fix the gnav strut to the carriage on the top of the boom (it may be already attached).
- 9 Having fixed the boom and gnav to the mast you can thread the gnav control line. This comes out the underside of the boom at the front. Attach this line to the small block which is on the continuous control line, which runs back to the Twart (orange rope).

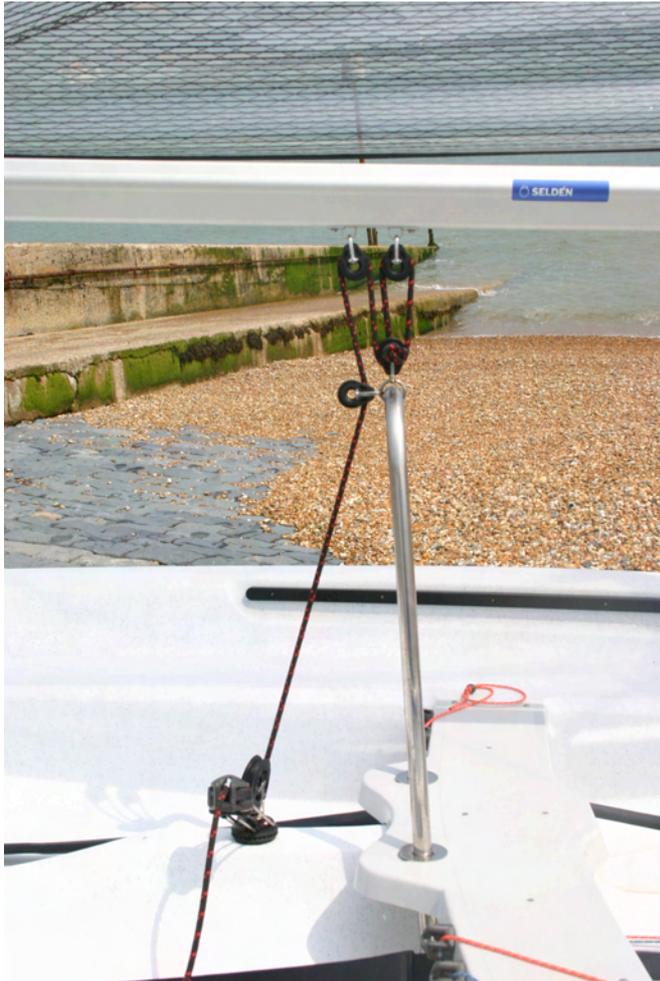


Attach main Halyard to the end of the boom.

TIP: You can tie a stopper knot in Halyard by the mast to support the boom while you rig).

11 Finally you can thread the mainsheet as follows:

- Starting from the centre cleat, round the ratchet (remember to check it clicks when the rope is pulled in).
- Through the rear block on the centre hoop.
- Up to the rear block on the boom, going from back to the front.
- Then down to the other block on the centre hoop.
- and up to front block, going front to back then back down to the front block, and through the hole in the centre.
- Then tie off with a figure.



- 12 Then attach the foot of the jib to the Furler at the front of the boat (ensure the Furler is fully wound up). Attach jib head to the swivel on jib Halyard.



Tape the split rings without impeding the action of the Furler.

Make sure you are still head to wind.

Raise the jib by pulling the Halyard through the mast until the wire loop appears, then put the hook which is attached to a pulley system at the base of the mast through the loop.
Tension the jib by pulling on the pulley system.



Attach the clew of the jib to the jib sheets by passing sheets through the plastic eye and tie off.



15 Undo forestay and attach to beam eye on the base of the mast.

- 16 Take jib Halyard tail and stow in tidy bag on top of Gennaker sock.
- 17 The lowers can now be tied off tightly (you will only need to do this the first time you raise the mast)

Now you can furl the jib. Make sure the sheets are completely free and pull gently on the Furler line. It is important to make the furl as loose as possible and to ensure there are no creases in the material when you do this - otherwise you can damage the sail.

(**TIP:** Do not leave the jib furled for too long - especially in bright sunlight).
(**TIP:** It is not advisable to leave jib up overnight).

REMEMBER TO TAKE THE JIB TENSION OFF WHEN NOT BEING SAILED - the shrouds will be able to be moved by 6" and seem very slack.

Rigging the Gennaker kit

The Gennaker Halyard is entirely external. One end ties straight on to the head of the sail while the tail passes through the spreader eye and down the side of the mast.

- 18 Thread the tail down through the block on the bottom front of the beam.



- 19 Then forward, around the free block located to the side of the Gennaker chute (attached to the line that pulls the pole out).



- 20 Then back to the spinlock cleat on the port side of the mast.
- 21 Lead the end down through the block at the front of the centerboard case. Round the back first (i.e. feed forward from the back of block).
- 22 Then through the eyelet on the deck, then eyelet at the back of the sock. Feed it up the sock to the mouth of the chute.

(**TIP:** Remove a batten from the mainsail and feed this through the sock and use this to pull the Halyard through).

Tie it off so you do not lose it!

Bowsprit - Gennaker pole

- 24 The tack line emerges from the forward end of the bowsprit. Tie a figure-of-eight knot about 6in/15cm from the end of this line and an overhand knot right at the end.

Pull the pole right out. The easiest way to do this is to tie off the top end of the Gennaker Halyard and pull on the other end. This should launch the pole by pulling the single block back down the boat. Ensure that the pole is right out. The lines should be pre-set to the correct position - i.e. the pole goes right out. When it is out the figure-of-eight knot in the tack line is pulled right to the end of the pole.

If you need to adjust any of these remember that they are all interdependent. So moving one will affect the others. For instance, moving the knot which attaches the aft end of the tack line to the deck-eye on the beam of the boat in front of the mast will affect how far the pole can go out and the distance from the tack of the sail to the pole end.

(**TIP:** Bear in mind the fact that, the rope may stretch initially, so you may need to adjust the knot after the first time you sail).

Rigging the Gennaker sail

Tape over all protruding fittings and fixings around the bow (including the clevis pin and split ring under the roller Furler fitting). The Gennaker is a big sail and if it can catch on anything it will!

- 25 Pass the overhand knot at the end of the tack line (at the outer end of the pole) through the eye at the tack of the sail (marked "T") and tie a half-hitch, using the overhand knot as a stopper. Ensure that the sail is not twisted
- 26 Follow the Luff to the head of the Gennaker (marked "H") and attach it to the top end of the Gennaker Halyard using a bowline. Pull the Gennaker up the mast slightly to give yourself some slack in the downhaul.
- 27 Attach the sheets to the clew (marked "C") with stop knot. (**TIP:** The neatest way to do this is to find the centre of the Gennaker sheet and push a small loop of it through the clew cringle. Pass both the tails through this loop and pull tight. If you tie the ends together with a fisherman's knot the crew will always be able to release the Gennaker sheet. This hitch is small and will therefore slip around the jib luff easily when gybing. Remember to thread the sheets through auto ratchet in the correct direction).

Or you can tie the sheets to the Clew.



Now you have all three corners of the Gennaker tied on and you can attach the downhaul. This can be tricky - and embarrassing if you get it wrong - especially if you do not notice until the first hoist or even the first gybe! A good way to remember how to connect it is to make sure that the downhaul is always behind the tack line and in front of BOTH sheets. To collapse the Gennaker neatly into a short sock when dropping, the Xenon utilises a two-patch system: an eye near the foot and a webbing loop near the head.

- 28 Untie the downhaul from where it is tied off at the chute mouth.

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- a Pass the end through the eye in the bottom ring.
- b Then put one of the red bobbles on the Halyard before you tie the end of the Gennaker downhaul to the webbing eye on the top patch using a bowline. This stops your bowline getting caught in the ring. Remember to bring the downhaul out behind the tack and in front of both sheets.



- 30 You should now be able to pull the Gennaker down into the chute, ensuring that it does not snag around the pole-end or under the bow.

(**TIP:** When launching the Gennaker. Pull Gennaker Halyard from block NOT direct from chute. This will prevent wear and tear at chute opening).

Raising the Mainsail

Battens

The sail is supplied with all 4 battens inserted but they may not be fully tensioned. Ensure that the forward ends are properly bedded into the end-fittings. Use just enough tension to remove all of the creases.

Main Halyard

31 Attach foam block to head of sail. Tie off as shown.



(**TIP:** Offset the sail to the port side of the boat to avoid jamming).

A good knot for tying the Halyard to the head of the mainsail is a simple half-hitch with a stopper. This takes up less Halyard than a bowline and fits snug to the headboard, allowing you to pull the sail right to the top of the mast (the luff bolt rope will stretch a little when you do this).

(**TIP:** or use a ball on the end of the line. Make a loop, feed through the eye at the top of the sail, feed ball through loop, and tighten).



Check that the boat is still head to wind and hoist the sail.

36 Ensure that the luff is engaged in the feeder at the bottom of the track. It is easy to hoist the sail by pulling the Halyard straight from its exit from the mast. When you have pulled the sail right up, place the Halyard in its Clam cleat on

the mast and "sweat it" to get the sail right to the top of the mast. (Hold Halyard just above cleat and pull away from mast at 90 degrees. Recleat. Repeat until sail is hoisted fully.)



(TIP: Check the wear on the Halyard regularly, particularly where it goes over the masthead sheave. You can prevent excessive wear by moving the knot at the head every so often by adding additional overhand knots further and further down the Halyard. When you have done this a few times you will have to trim the excess knotted line to save windage).

The Cunningham/downhaul which is the other continuous line is taken through the top eye then down through the small hole in the goose neck and up to the lower eye and tied off.

Then insert the black slug in the lower part of the mast.



38-39 Having raised the sail, insert the slug at the back of the sail into the track on the boom.





- 40 Take the control line from the sheave in the boom-end fitting and feed through the eye in the sail and back through the pulley in the boom-end. Then via the notch in the fitting underside. Tie a small knot in end.



When sailing upwind you will nearly always have the outhaul pulled quite tight but you may wish to loosen it for the downwind legs. You can pre-set the "off" position by tying a large knot (or use a ball) about an inch from the cleat when the foot is pulled tight. This means you simply have to uncleat at the windward mark and it will be in about the right place for downwind sailing. Remember to pull it back on before rounding the leeward mark!

Reefing the mainsail

41 To reef the main sail, detach Outhaul and Cunningham, then lower mainsail so upper zip is in line with boom. Roll the sail from the bottom as tightly as possible. Then connect the zips to complete the reef.

Re-attach the Cunningham. Slide slug back along top of boom end. Re-attach clew end fitting to outhaul. (**TIP:** Loosen outhaul at front of boom).

Maintenance

The Xenon is designed to require very little maintenance, but there are some simple ways to keep your boat in first-class condition.

Mainsheet

Tie a figure of eight knot in the mainsheet at a point which will prevent the boom hitting the shrouds.

Rudder

Never launch without checking that the retaining clip has clicked into place beneath the upper transom fitting.

Sails

After sailing, roll the mainsail loosely. Never fold Mylar sailcloth.

Never let the sails flap unduly.

Furl the jib as soon as you hoist it (even in light airs). Try to get into the habit of furling it while launching and recovering the boat, between races and when you capsize in windy conditions!

The mainsail is protected to some extent by the full-length battens which stop it flapping but you should never leave it hoisted for extended periods on the shore.

Be as gentle as you can with the asymmetric. Drops have to be fast but if the crew can pull smoothly the sail will last longer. You should also keep an eye on the Halyard cleat: really strong (or unobservant) crews have been known to pull the patches out of cleated kites... Avoid trawls - the helmsman can help if necessary by taking the sheet on the drop. Bearing away a little also makes the pull easier.

Always rinse the sails and boat after sailing in salt water.

Remove the Gennaker from the boat after sailing - mice have a taste for Gennakers left in boats! If you must leave it in the chute overnight make sure that the corners are flat (i.e. not folded or crushed). Always dry the Gennaker flat (not flapping in the wind!) before folding it.

RELEASE JIB TENSION WHEN NOT BEING SAILED.

Foils

Repair any nicks or deep scratches on the rudder with gelcoat filler. Even the slightest damage to the shape or surface of the foils will affect their performance. If your boat vibrates or hums it is usually due to minor damage to the foils.

Make sure that the rudder blade remains tight in the stock when down. Any play between the blade and stock, or between the stock and the hull, may cause steering problems.

Hull and fittings

You can repair small dents by gently warming the hull with a hot air blower (take care NOT to melt the hull); for more substantial repairs refer to Topper International.

Check the attachments of all fittings regularly. This is particularly important for fittings screwed on to fixings set in the hull. Keep all blocks, cleats and ropes clean. Always rinse them out if they have been exposed to salt water.

Always remove the drain plug and empty any water in the buoyancy tank after sailing. When not using the Xenon leave the plug out to allow air to circulate and to prevent excess pressure build-up in fluctuating temperatures.

Ropes

Replace any ropes showing signs of wear immediately. Too many championships have been lost by failing to replace a damaged rope when it was first noticed!

Tips

Upwind

For a medium wind (crew sitting out hard, but able to sheet the mainsail to the centreline) you should be able to use maximum power. Use very little or no cunningham. The outhaul should be set so that there is about a 3in (7-8cm) gap between mainsail foot and boom at the point of maximum chord. Try to keep the boom on the centreline, provided that the boat remains flat.

The jib can be eased about 1-2in (5-10cm) from maximum tightness for optimum

performance. As the wind increases, reduce the power in the mainsail by pulling down on the cunningham progressively until the boat feels comfortable and balanced again. If you have tell tales on the leech, use enough gnav to keep them flying.

For very windy conditions flatten the main by tightening the outhaul, tensioning the cunningham further (with a fully-battened sail this has the effect of flattening the sail without pulling the fullness forward and can therefore be used much more than with a conventional mainsail). Sit out hard and sail free.

In light airs, use little or no gnav to allow the leech to open.

Tacking

Be aware that with a fully-battened sail the power comes on very fast after the tack. Do not over steer with the rudder as you will find yourself on a reach. Do not sheet in hard immediately, with either main or jib, until the boat has picked up speed after the tack. Whenever the boat slows down it pays to ease sheets, bear off a couple of degrees and then point up again once the boat has regained speed.

In light winds, when about to tack, make sure that there is some gnav tension, as this will help the battens to flick across. Ease the sheet a few inches before tacking. A sharp pull when you reach the new tack will also help the battens across.

Downwind

With an asymmetric Spinnaker, large distances can be gained (and lost!) very quickly. It is essential to keep the boat traveling at the optimum speed and direction towards the next mark. This direction will vary according to the wind strength. In light airs, at displacement speeds, where sailing higher will not result in a great increase in speed, it pays to sail low towards the mark. In marginal planing conditions, sailing higher will allow the boat to plane and the consequent increase in speed help to offset the extra distance traveled. The boat can be sailed progressively lower as the wind strength increases.

Just when to sail high or low and at what precise angles will come only with experience, so keep practicing. The crew can have a better idea of the correct angle to sail by feeling the power in the spinnaker sheet. Allow the crew to call the pressure. Sail as low as possible, keeping the pressure on, unless there are overriding tactical considerations.

Gybing

An asymmetric Spinnaker is far easier to gybe than a conventional spinnaker and takes no longer than tacking. Ideally you should always gybe when the boat is traveling at maximum speed as there is less pressure on the sails. It therefore pays to gybe 'reach-to-run'.

If you try to slow down and gybe 'run-to-run' the spinnaker pulls the top of the mast forward, making the boat unstable and less controllable. The additional air pressure

will make the mainsail harder to pull across. So be positive and gybe smoothly and at speed.

In strong winds you will probably have borne off so that, although the apparent wind still shows a broad reach, you are in fact running directly before the true wind. If you then try to gybe through your normal angle you will gybe on to a reach and be over-powered! So in strong conditions remember to gybe through a smaller angle.

As with tacking, apply some gnav tension and Cunningham when gybing in light airs to help the battens flick across.

Towing

When towing your Xenon ensure that it is securely strapped down with a strap over the middle and the bow strapped down to the road base. The launching trolley will lock into the road base at the axle with the front being held on with a lock pin on to the post.

Ensure the mast and all other equipment is securely fixed to the boat before towing.

The road trailer should be secured to the towing vehicle with the wire safety loop as well as the ball hitch and be fitted with a rear lighting board to conform to local regulations.

Boat tips

- Do not step mast near any overhead cables.
- Tape all rigging pins and spreader ends, inboard and outboard.
- Put a figure of eight knot in the mainsheet so that the boom cannot hit the shrouds.
- Tighten all shackles, screws and bolts regularly.
- Ensure the rudder retaining device is in position.
- Ensure rudder is fully down when sailing.
- Never fold Mylar sails.
- Tape all fittings in and around the spinnaker chute and don't leave any sharp edges.
- Never allow the jib to flap.
- Roll mainsail gently after use and leave battens in place.

- Ensure battens are located correctly in batten pockets