

## **Enterprise Clinic Handout**

This handout is a modified version of one that was originally produced for an Enterprise clinic held at a club in the far western reaches of NW Area. Although the local element of some of the resource material has been retained, much has been altered for a national audience. I hope you find the information useful.

The topics covered include:-

- [Preserving your boat on shore](#)
- [Towing and Trailing](#)
- [Boat set up and tuning](#)
- [Suppliers of fittings and clothing](#)
- [Useful websites for resources and boat sales](#)

### **Preserving your boat on shore**

Most insurance claims are a result of damage on shore, and the largest cause of boat deterioration is the build up of water inside the hull. The consequences of water and moisture ingress into the hull and decks are particularly rapid during cold weather.

The aims of this section are therefore to stop your boat blowing over in high winds, and to ensure all water drains out.

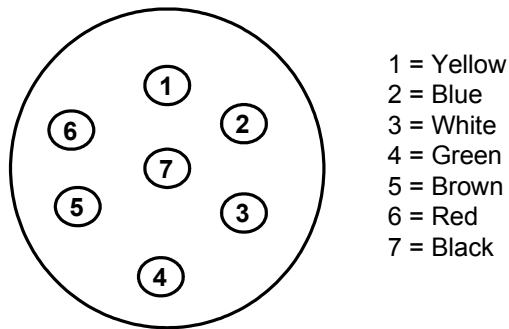
- Remove hatch covers to allow buoyancy tanks to air (if tanks are air tight will also prevent pressure build up. Good practice between races too.)
- Remove the bungs from the transom drain holes and open the self bailers.
- Support boat on rack (or similar sturdy object) placed at the front under the trolley. For an Enterprise on a West Mersea trolley a rack 29" in height will leave the transom just clear of the ground. (Other trollies may require a slightly greater height.) Do not be tempted to place a tyre under the stern as this can trap water and rot the exposed edge of the bottom ply.
- Drive stakes (with hole or loop at the top) into the ground either side of the shrouds. Hold the boat down with an old main or jib sheet fastened to the hole at the top of the stake. Pass the rope over the boat, round the mast and down to the other stake. (If you are unable to acquire suitable stakes chandlers such as 1<sup>st</sup> Mark sell "corkscrew dog tethers" for this purpose – cost £3.50 each).
- Check the boats next to yours are tied down! If not have a word with the owner, or tie it down yourself.
- If buying a new cover, breathable ones will reduce the build up of moisture. They are more expensive but well worth the extra cost.
- Winter storage can be a real problem for many boat owners. Anywhere the boat can be stored and kept bone dry is obviously the ideal. If you are unable to find suitable accommodation in garage, stable, shed, lounge or whatever. You must try to keep you boat dry to avoid damage caused by rain and frost. The owner of the boat in the picture was faced with this problem, and has adopted a multi-layer approach. The boat has the mast down and is supported on a rack with the bungs removed, the bailers are open and the bungee on the transom flaps has been eased. Foam pipe insulation has been fitted on the rubbing strips, and the boat protected with a cocoon cover and two boom up covers (the top one is

ancient). An additional collar has been fastened round the mast, and is held tightly in place by bungee cord. A further piece of bungee has been placed just in front of the collar, so that any rain water running down the mast drips off at this point. The boat is fastened to the trailer at the bow and to fixing points by the wheels.



### Towing and Trailing

- Inspect your trailer. Will it get you and your boat to your destination? If in doubt get it checked by an expert. (Port Sunlight Trailers will do a good job and are very reasonable. Check Yellow Pages or the [Indespension® website](#) for your nearest equivalent.)
- Never let your road wheels enter the water.
- If your trailer fails your relay policy is unlikely to include recovery of your boat, although the RAC etc will probably endeavour to get you to the next services. If your car fails, your boat is likely to be covered by the relay policy.
- Carry a spare wheel.
- Fit a chain or wire strop from the front of the trailer to place over the ball hitch when trailing. This will prevent the car and boat becoming separated if the coupling fails. It is a legal requirement to have one of these fitted.
- I only use 2 fixing points, (i) rope from bow fitting to frame of the trailer (not trolley), and (ii) a strap attached to the road trailer across the middle of the cockpit. Use pieces of carpet to protect the decks and do not over tighten.
- Secure the boom to the thwarts with bungee cord and protect with carpet. I also tie the end of my boom to the mainsheet track to stop it moving forward.
- Use rudder fittings on the lighting board to attach the lighting board to the transom, and incorporate a mast support. Commercial mast supports are available (£36), but can easily be made from a spare piece of skirting board and ply. Glue pieces of sponge onto the back of the board.
- Corrosion or loose connections can cause lighting board problems. If the wires become detached, it is difficult to work out the permutations without a key. The diagram below shows what goes where. If, after reconnecting, you are still having problems remember the total cost of replacing the lighting board plus number plate is only £20.



**View of 7 Pin Plug with wiring key**

- Not essential but cocoon or under covers are useful if you are doing a lot of trailing and want to protect your boat from road grime and stones. (Most under cover users also fasten their boat cover over the top or use a flat trailing cover).
- If you need more information the [Indespension®](#) Catalogue is mine of useful advice.

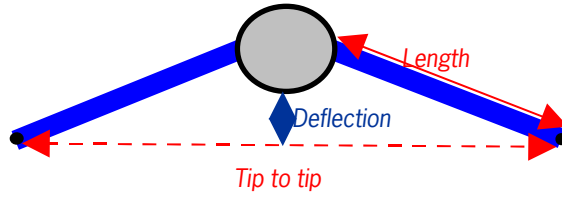
### **Boat set up and tuning**

A boat, which is set up correctly, will go where you want it to go, be easier to sail and go fast. Here are a few tips that may help. More detailed information is given in the tuning guide on this website. Most sail makers have details of their precise set up recommendations on their websites.

- Check the rudder is vertical, and tighten the bolt (or fit Formica spacers) if it is a sloppy fit in the rudder head.
- Is centreboard vertical when fully down? Repair any damaged areas. An epoxy fillet on the leading corner gives a very much more robust surface. Take great care when coming into the shore to prevent the foils and hull grounding.
- Replace the centreboard gasket if badly worn.
- Make sure buoyancy bags are puncture free and are each held down by 3 straps. Use stainless steel screws on bag fittings.
- Make sure the toe straps are secure. I prefer not to attach the helms straps to the centreboard knee as I tend to sit in that region. Mine stretch from an eye in front of the case to the normal fixing point near the transom. Other helms have adopted the same approach (See photographs of cockpits of Hyperactive and Paper Plane at the end of this section).
- Use vertical jammers on jib (easier to get out when boat is heeling).
- The inside edge of the jib fairleads should be 59.5cm from the centreline (i.e. 119cm from inside edge to inside edge.)
- When pulled tight the line of the jib sheet should intersect the luff at its mid point (1918mm from tack)
- Fix the mainsheet traveller at centre point.
- Jib and main sheets - I use 8mm diam polyester. I do not like using thinner rope as it is difficult to grip and thicker rope runs less freely.
- Use a wire halyard for the jib and tension it with a Highfield lever.
- No need to use wire on main (but with wire you can always guarantee to achieve the same settings). If rope, use non-stretchy type such as Kevlar.
- Mast set-up – Modern masts are fitted with spreaders which can create and control “mast bend.” The precise settings vary with the sail shape. Each sail maker recommends slightly different settings.

Spreader settings

The settings given by each manufacturer vary. All quote spreader length, and either deflection or the measurement from the end of one spreader to the other (tip to tip).



Spreader length is measured from the side of the mast to the shroud. Spreader deflection is measured from the back of the mast to a straight line between the shrouds where they pass through the spreaders (A jib stick can be used to form the straight line). To obtain the tip to tip distance measure the distance between each shroud at the spreader tip.

In general for flatter sails aim for a spreader deflection of 160-165mm and try 170-180mm+ for older or fuller sails.

The values for Superspar and Proctor masts are given in the following tables.

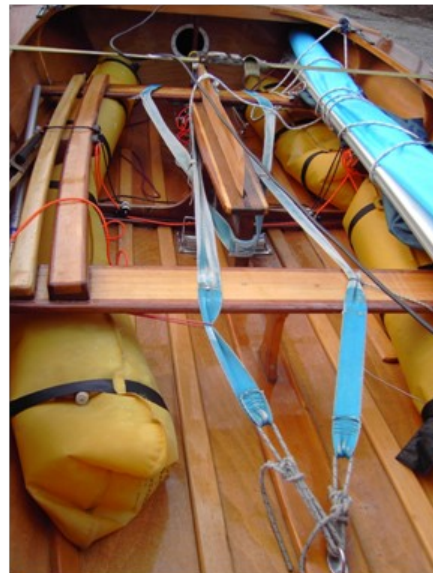
Superspar			
Mast	Length	Deflection	Tip to tip
<a href="#">North Sails</a>	410mm		780mm
<a href="#">McNamara</a>	410mm	177mm	
<a href="#">Pinnell and Bax</a>	410mm	165mm	
<a href="#">Purple</a>	410mm		770mm
<a href="#">Speed Sails</a>	410mm	177mm	

Proctor			
Mast	Length	Deflection	Tip to tip
<a href="#">North Sails</a>	410mm		760mm
<a href="#">McNamara</a>	410mm	177mm	766mm
<a href="#">Pinnell and Bax</a>	413mm	160mm	
<a href="#">Purple</a>	410mm		770mm
<a href="#">Speed Sails</a>	420mm	171mm	

Mast rake and rig tension

- There is a lot of mystique about mast rake settings. All you are trying to do is to get the jib and mainsail balanced so that if the boat is flat it goes in a straight line when hit by a gust without having to correct the direction with the rudder.
- A mast rake of 21' 2" (6452mm) at a rig tension of 400lbs gives the best compromise of upwind and down wind speed. Most top sailors use between 21' 1" and 21' 3".
- The mast foot should be as far forward as the class rules allow. Measure 2689 mm from the aft face of the transom to the back of the mast.

- With the jib hoisted and rigging tensioned to 400 lbs, fix a tape measure to the main halyard and hoist it until the tape measures 18'6" (5640mm) at the top of the black band just above the gooseneck. (The top of the tape is now at the bottom of the upper black band). Cleat the halyard and extend the tape back to the back edge of the transom and measure the rake.
- Measure the rig tension on the shroud with a gauge, and always at the same height. Look after your gauge to maintain its accuracy.
- For older boats or in light winds have a lower rig tension of 300lbs -350lbs. There will be no loss of speed below a force 4. I know a very successful club sailor who uses 280lbs his 39 year old boat for most conditions.
- An additional point for people with older masts such as a gold coloured Procter E. The upper pulley on older masts is positioned several inches (4"/10cm) above the top black band (compared to 2"/5cm on newer masts) and this will have a small effect on the mast rake measurement. One way of overcoming this problem is to hoist the tape to the upper black band, and then turn your boat on its side. Get a friend to hold the halyard against the mast 2" above the band and then measure the rake to the back edge of the transom. If you have an old Proctor mast, and don't know what style it is the name is usually engraved on the top.



Toe strap arrangement on Paper Plane (left). Helm's strap attached low down on front of centreboard case and crew's attached at rear of case. A supporting bungee cord is required to lift straps at mid point. A similar approach has been adopted on Championship winning Hyperactive (right). Only major differences are higher the fixing points on case and the straps run above thwarts.

### Suppliers of fittings and clothing

I have compiled a non-exhaustive list of places where you can acquire bits for your boat and trailer.

#### Local to Chester

- [Dee Sports](#), Brook Street, Chester – clothing, buoyancy aids, wet suits, boots.
- [1<sup>st</sup> Mark](#), Enterprise Industrial Estate, Golborne. From J23 of M6 take the East Lancs Road (A580) towards Manchester. Follow the Golborne signs off the first roundabout.
- [Mailspeed](#), 16 Greys Court, Kingsland Grange, Warrington 08456 581470 – Leave M6 after Thelwall Viaduct (J21) and take road which runs alongside the motorway. Look for the Kingsland Grange sign.

- [Reliance Marine](#) – At Northern end of West Kirby Marine Lake and in Hoylake (behind Hoylake railway station).
- [Port Sunlight Trailers](#) – Good for trailer and trolley wheels, lighting boards, hitch locks and trailer accessories. From Port Sunlight roundabout on the A41 take the New Ferry exit. You will find it on your right after about ½ a mile.
- [Leyton Fasteners](#) – Stainless steel screws and bolts. Cook Street, Ellesmere Port (off J9 M53). [Map](#)

### Mail Order

See the list of chandlers listed in the next section. All have user friendly websites and well stocked chandleries. Click on the chandlers name to find location details on their website if you want to pay them a visit.

### **Useful websites for resources and boats sales**

If you're looking to buy or sell an Enterprise, or equipment, go to the "For Sale" button on the front page of this site to view a wide range of advertisements for boats, sails and bits and pieces. You can type in your advertisement. The item will appear the next time the website administrator logs on. Members of the Association do not have to pay to place an advertisement. The cost is £10 for non-members.

It is easy to recoup the Association membership fee of £25 by going to the free training days and taking benefit of the insurance discount. You can also get money off chandlery and clothing with the following suppliers:-

[Andark Diving and Watersport](#)  
[Boats and Bits](#)  
[Dinghy Store](#)

[Guildford Marine](#)  
[Jeckells of Wroxham](#)  
[Pinnell and Bax](#)  
[Purple Marine](#)  
[Sail Register](#)  
[Speed Sails](#)  
[Trident-UK](#)

Swanwick, Southampton  
 Norwich, Norfolk  
 Horton, Slough – From January 2009  
 Purple Marine  
 Old Woking, Surrey  
 Wroxham, Norfolk  
 Northampton  
 Sutton Coldfield, West Midlands  
 Keelyby North Lincs  
 Aldridge, West Midlands  
 Gateshead

The follow discounts apply at non-sale times.

£1 of for purchase over £25  
 £2 of for purchase over £50  
 £7.50 of for purchase over £100  
 £20 of for purchase over £250

To take advantage of the insurance discount of £5.25 off your insurance via Noble Marine. Click on the Noble logo on the front page of this site (this link takes you directly to Noble's Enterprise page) or ring Noble's 01636 707606 and quote your membership number.

All members also receive an Enterprise diary twice a year and support from the office in Southampton. If Bob and Paula cannot help you out they are generally able to find someone who will be able to help.

*Additional for sale sites*

You can also find Enterprises for sale on the following web sites:

Appollo Duck

Boats and Outboards

Speed Sails

Pinnell and Bax

Yachts and Yachting

Dinghy Sailing Magazine You will have to register to gain access to the for sale board.

Noble Marine

Ebay