

Training at Lee on the Solent

The fleet held a training day in May at LOSSC run by Toby and James. They decided to concentrate on the following aspects of FD sailing.

Provide a guide to creating a simple easy to achieve set of rig numbers.
Look at basic rig set up and offer guidance for possible improvements.
Aim to improve communication inside the boat
Create awareness of what is happening on the racetrack.
Point out areas of boat handling that are causing problems and help provide solutions.
Provide the tools to deal with what is thrown at you on the racecourse.

As with most training events there is a lot of information to assimilate so I thought it would be good if the information was recorded for posterity.

Rig setup/Calibration

The aim here is to get a matrix of numbers for each clew position so that when the clew has to be changed during a race the rig can be quickly and easily adjusted so it is close to optimum from the outset then tweaked as you are traveling up the beat. To do this make sure you have assigned easy to see calibration marks to the genoa, shrouds, lowers and centreboard for reference.

Note: The matrix is not the definitive answer to boat speed. Rather, it is a tool to get you close to optimum quickly and a base point to return to if boat speed is poor.

The following are rough guides to set up. These should be used as the start point for creating your own matrix.

Clew 0 (very light air)

Mast upright, Lifters up and in(or just up if no lateral adjustment) clew sheeted about 100 mm off max in. Shrouds tight. Record numbers

Clew 1: Adjust the genoa halyard so that the top of the clew is level with the top of the gunwhale. Pull the shrouds on so that they are tight, recheck the clew gunwhale relationship and then pull on the lowers for to obtain a straight mast. Record numbers

Repeat the procedure on clew 1 for the remaining clews 2, 3 and 4.

Once these settings have been obtained go on the water to tweak the numbers for the prevailing conditions.

Crewing

The FD uses a continuous trapeze system that enables the crew to tack the genoa easily and quickly. Crews should adjust the 'cowhorns' to suit for the clew and use the lower trapeze gaer to adjust ride height. The upper adjustment could also be calibrated for clew position. For a good explanation of crewing the FD especially taking look at Hugh Myers account at this address <http://www.sailfd.org/GBR/index.htm> and click Try an FD and then on Crewing an FD.

As the conditions were very light at Lee on the day emphasis was concentrated on crew and helm position in the boat. Crews were encouraged to get as far forward as possible to reduce drag from the transom being in the water. It was noted that in most boats it was the helm that was most guilty of sitting too far aft, often behind the traveler.

Genoa setting

Initial setting for the genoa pulley positions on clew 1 are; Top of the lifters level with deck and the lifter positioned in the middle. Genoa to about 20mm off the genoa pulley. As the mast is raked ease the cars outboard.

One indication of car up and down position is to look at the telltales near the genoa luff and make sure they all lift together. If the top one lifts first cars down and vice versa.

In very light wind the cars are inboard and up, sheet so that there is about 100mm off the pulley genoa and the sail is approximately 20 cm off spreader.

Mainsail setting

Outhaul

In light conditions the mainsail should be 25mm from the black band (max) this should be increased as the wind come up and the crew begins to trapeze (there may be some differences with different sail makers)

Kicking strap

In light conditions kicker is off. When the wind increases the kicker should be used to maintain the top leach telltale flying for 75% of the time and the top batten should be pointing over the transom of the boat

Cunningham

Use this in two ways , It can be used as depowering tool when overpowered but the team is not able to change clew. Do not be afraid to get heavy handed at this point, you are trying to stop the boat staggering and the main flogging. The Cunningham can also be used to optimise sail shape. As the wind increases and particularly as the crew moves from sitting on the side to trapezing, the mast will naturally bend more. The effect of this is the draft of the sail will naturally move aft. Using the Cunningham control returns the draft to the desired position. This will vary for different sail makers but is normally in the region of 45% aft from the mast

Sheet

The mainsheet needs to be used in partnership with kicking strap to control the twist in the main. In light airs use the mainsheet rather than the kicking strap to control the twist as this is easier to adjust for changes in the wind speed. Position the traveller so that when you have the desired tension the boom is on the centreline (or just to windward)

As the wind increases the kicking strap will be used as well as the mainsheet to control the twist. Some people will prefer to use the traveller to ease the main other the mainsheet. There is no right answer as long the main is trimmed to keep the boat flat. The only point to note is that if you ease the mainsheet, the kicking strap is on tight enough to maintain the twist on it's own.

Spinnaker

There are many launch systems in place from spiro to twin poles with spiro to single pole hand launch to twin pole hand launch. The main things to look out for is pole height, keep the middle of the luff curling. Don't be afraid to have a very low (nearly horizontal) pole in very light airs.

There are two options on close reaching to consider, either pole up, which bring s the pole back reducing direction but making it slightly easier to control or pole down or leave alone making it harder to control but adds ability to go to windward if attacked. Note: Ideally the control needs to be led so the helm can easily change this as the situation on the race course changes.

On the run set the pole according to the curl and bring the pole back to increase the projected area. Keep the leading edge curling which requires immense concentration.

Communicate with the helm to enable him to steer the shortest and fastest course to the mark. Keep this communication going up wind as well. Decide and divide on duties for the upwind bit.

Centreboard and rudder

Use the centreboard to balance the helm. If your boat does not have a moving centreboard control rake the board aft to balance the helm. As the mast is raked the board needs to be moved aft as well to maintain balance. Even if the board can be moved aft do not be tempted to move it too far. It is more efficient to move it a smaller amount and combine this with rake.

Sailing the boat

As the wind at the training was very light emphasis was placed on keeping the boat moving through the water as fast as possible. Roll tacking is important to maintain momentum through the tack. Initially heel the boat to leeward to use the hull to steer the boat into the turn the crew should then move over to the new leeward side with helm and the helm should stay there until the tack is completed. This minimises rudder action and hence minimises speed loss.

In light conditions the helm should be in front of the traveller to get the transom out of the water to prevent drag. The team should be vigilant in detecting wind conditions adjusting the sheets as necessary i.e. ease when the wind drops (and when there are waves to go through), squeeze on when the wind increases. In very light airs do not be afraid to sail the boat quite free to keep it moving as they are heavy and need encouragement to get going. Once the speed is building start to squeeze back up for height, as speed drops ease down until back up to speed.

Changing gears

To know when to change gears is probably one of the most important aspects to master. The boat should be sailed with a little back-winding in the main. Use a telltale placed just above window height this will stall when the slot is to closed. Also two telltales on the upper leach of the genoa helps to inform on the setup. Basically if the boat is staggering you need to look to change to the next clew.

Communication

Communication is very important. See the article on Crewing by Marc Van der Pol in the July 08 newsletter for one teams view point on how they divide the tasks.

Thanks very much to Toby and James for their time and effort

Colin Burns wrote the notes.