



HFSC Club Boat Sailing Guide



1.	Introduction	2
1.1	General Points	2
2.	Boat Settings and Sailing Guide	3
2.1	'Fixed' Settings	4
2.1.1	Cleat Angles (Mainsheet and Jib)	4
2.1.2	Mast Rake	4
2.1.3	Diamond Wire and Shroud Tension	4
2.1.4	Jib Cars	4
3.	Rigging Tips	4
3.1	Mainsail	4
3.2	Jib	4
3.3	Spinnaker	4
4.	Single-handed Sailing	5
5.	Capsize Recovery	5
6.	Landing and Recovery	5
6.1	Landing in high onshore winds	5
7.	Sailing in Windy Conditions	7
7.1	Upwind	7
7.1.1	Mainsheet and Cunningham	7
7.1.2	Other ways of depowering the boat upwind - traveller	8
7.1.3	Other ways of depowering the boat upwind – mast rotation	8
7.2	Downwind	8
8.	Using the Spinnaker in Lower Wind Conditions	9

1. Introduction

The SL16 has much to recommend it as a Club boat intended to be sailed by people with a range of skills, experience and expectations. It is light and easy to handle on the beach and being a skeg boat there are no dagger boards to get damaged. It is forgiving, easy to sail and (apart from dagger boards) it has the key features found on any modern racing catamaran including fully battened mainsail and jib, diamond wires, Cunningham, twin trapezes, mast rotation control, jib luff tension control and a spinnaker. For a 16' boat it is no slouch and it performs well across a range of wind conditions.

To have been accepted for HFSC's Club Boat Scheme (the CBS) you must already be an experienced catamaran sailor so this guide is not intended to cover catamaran sailing basics. However, it is probable that many CBS members will have sailed boats without a spinnaker, diamond wires or mast rotation control so this guide focusses on these areas in addition to boat setup and sailing guidance applicable to the SL16, particularly for high wind sailing.

Comments and suggestions about this guide or the Club Boat Scheme are welcome and should be directed to the Club Boat Officer. Also please use the Club Boat What's App group to communicate with the other club boat users.

1.1 General Points

Firstly, it is not acceptable to come ashore by sailing the boat up the beach. Neither is it acceptable to rely on the rudders hitting the bottom to kick them up. See section 6 on Landing and Recovery for details.

Do not let the sails flog unnecessarily. If it is windy do not hoist the sails until just before you launch (particularly the jib), and drop them at the first opportunity when you come ashore. Roll the sails so that they do not blow around (do not chuck them unrolled on the trampoline where the wind can get underneath them).

Be careful with trapeze hooks on the hulls when getting on or off the boat, and avoid dragging yourself stomach-first across the hull. Turn around and get onto the boat bum-first using your arms so you do not dig the hook into the gelcoat, and slide off the boat on your bum when you want to get off. If you are climbing onto the lower hull after a capsize you will probably have to do this on your stomach but please be extra careful.

Please rinse the boat and its gear off after use (unless we are short of water in which case a notice will be posted by the outside tap).

The gear for each boat is stored in the box in front of each boat. Please put the boat back in the same space you got it from, and do not mix equipment between boats.

Report any damage or other issues to the Club Boat Officer.

When rigging (and de-rigging) the boat please use the stern supports. If you pull the wheels right forwards you will be able to reach the jib easily and the boat will be stable (and less likely to have the bows blown around if it's windy).

The Club does not impose any limit on the wind and sea conditions under which the Club boats can be used because of the wide range of experience and ability of those using the boats. Please be cautious and do not take a boat out unless you are confident that you can handle the boat in the current **and** forecast conditions. It may be disappointing to drive all the way to the Club and find that the wind is higher than you expected or feel comfortable with, but if you sail in conditions that are significantly out of your comfort zone then you risk hurting yourself and your crew, or damaging the Club's boat (which will cause problems and disappointment for other people). Work up slowly to wave bashing in a F6!

Finally, as mentioned at the beginning the SL16 has more sail controls and more sails than simpler boats (like a Dart 18 or Hobie 16) but you don't have to use them all if you don't want to. The settings outlined in this guide are more than sufficient to get you started and you can start to play with the other stuff later.

2. Boat Settings and Sailing Guide

The table below provides some guidance on key boat settings for different wind strengths, and helm/crew positioning on the boat. Some of these areas are expanded further in later sections of this document:

	0 – 8 knots	8-15 knots	>15 knots (see section 7)
Jib	<p>Upwind: sheeted just off the spreader. Luff tension to remove wrinkles.</p> <p>Downwind: set to telltails</p>	<p>As 0-8 knots but more luff tension required as sheet load increases</p>	<p>As 0-8 knots but even more luff tension required as sheet load increases</p>
Mainsail	<p>Upwind: <i>Cunningham</i> set to take wrinkles out of sail</p> <p><i>Spanner</i> pointing at shroud (when mainsail sheeted in)</p> <p><i>Traveller</i> centred.</p> <p><i>Mainsail</i> sheeted without hooking (closing off the top of the leech)</p> <p>Downwind:</p> <p><i>Cunningham</i> off, do not sheet the mainsail too hard but do not let it loose.</p>	<p>Upwind: Once you are twin-wiring and the boat is constantly flying a hull increase <i>Cunningham</i> tension to keep the windward hull down</p> <p><i>Traveller</i> centred.</p> <p><i>Spanner</i> pointing at shroud (when mainsail sheeted in)</p> <p><i>Mainsail</i> sheeted fully in once twin-wiring, sheet out in the gusts.</p> <p>Downwind:</p> <p><i>Cunningham</i> off, mainsail sheeted quite tight (but not as tight as upwind). Use the traveller to depower in the gusts NOT the mainsheet.</p>	<p>Upwind: Increase <i>Cunningham</i> tension to keep the windward hull down.</p> <p><i>Spanner</i> pointing at shroud (when mainsail sheeted in), you can point it more towards the rear corner of the trampoline as the wind increases if you are overpowered.</p> <p><i>Traveller</i> centred; you can drop it down slightly to depower if it is really windy.</p> <p><i>Mainsail</i> sheeted fully in, sheet out in the gusts.</p> <p>Downwind:</p> <p>As 8-15 knots</p>
Crew	<p>Upwind: sit right forward (on front beam, helm to windward, crew to leeward)</p> <p>Downwind: same as upwind, be ready to move back in the puffs</p>	<p>Upwind: Crew by the shroud, helm close behind. Start to use the trapeze as the wind speed increases. Keep together and move forwards or backwards to balance the boat.</p> <p>Downwind: Move further back as the wind speed increases.</p>	<p>Upwind: As 8-15 knots.</p> <p>Downwind: Helm and crew right back, on windward side of boat. If the sea is fairly flat the crew can trapeze from the footstraps using the helm's trapeze.</p>

2.1 'Fixed' Settings

Because the club boats are used by a range of people the following are considered as fixed and should not be adjusted by users. However, if you believe that any of these are adjusted wrongly please bring it to the attention of the Club Boat Officer.

2.1.1 *Cleat Angles (Mainsheet and Jib)*

These have been set to suit the majority of people (whether sailing from the trapeze or sitting in) and are not easily adjusted on an individual basis.

2.1.2 *Mast Rake*

This is adjusted to an 'average' position that is a compromise between power (mast forwards) and pointing upwind (mast backwards). You should not need to adjust this for Club use.

2.1.3 *Diamond Wire and Shroud Tension*

These have been set according to the 'book' and should not require adjusting; the Club does not have a rig tension gauge anyway so unless you have one yourself there is no way of setting these properly.

However please check the following and report any concerns:

- With no sails up the shrouds should be tight, but the mast should be able to rotate freely. It is ok if the leeward shroud is slack when sailing.
- The diamond wires should always be tight. If you sail with slack diamond wires you could break the mast.

2.1.4 *Jib Cars*

A spanner is needed to adjust these, they are not intended to be adjusted regularly.

3. Rigging Tips

A separate pictorial rigging guide is available, however please note the following points:

3.1 Mainsail

Don't forget to insert the mainsail top batten (and tie it in) before you hoist the sail, and take it out afterwards so that the top of the sail can be rolled (slide the batten into the next batten pocket down for safe-keeping, with a couple of inches showing so that the next person can pull it out easily but it will not fall out and get lost).

Tip when rolling the mainsail - keep the back edge (leech) in line with itself and let the front edge (luff) spiral back along the roll. This will keep the batten pockets parallel with the roll so that the sail rolls nicely.

3.2 Jib

The jib halyard is removable when the sail is up, please store it somewhere safe whilst sailing. Do not put it in the same pocket as the righting line!

3.3 Spinnaker

The spinnaker should be left on the boat and not de-rigged after use. The Club's sails should all be the same size so nothing should need adjusting if a sail is changed but it is good practice to check the luff tension before you go sailing (as long as it is not too windy!).

The spinnaker luff tension is important since it affects how well the sail flies. With the sail up, you should be able to grab the luff in your hand and turn through 90 degrees before it gets tight. Obviously it depends on the size of your hands but hopefully you get the idea.

The luff tension can be altered by changing the height of the pole and/or the amount of pre-bend. It can also be adjusted by changing the length of the strop holding the upper halyard block to the mast – you would need to put the boat on its side to adjust this.

Mast rake also affects spinnaker luff tension.

4. Single-handed Sailing

The SL16 is designed as a double-handed boat but can be sailed single-handed in the right conditions. If you sail the boat single-handed make sure that you can right the boat from a capsize on your own, or sail in company.

If you sail the boat single-handed please feed back on your experiences.

5. Capsize Recovery

The SL16 is easy to recover from a capsize using the normal techniques, however it does tend to float with the rig directly into the wind and needs the bows sunk to get the boat turned head-to-wind before righting.

Please ensure that the spinnaker is retrieved before righting the boat.

6. Landing and Recovery

Before your final approach to the beach please lift whichever rudder will be closest to the beach, and remove 2 of the 3 elastic rings from the other rudder mechanism so that it can kick up more easily if the rudder does hit the bottom. The SL16 sails fine upwind with just one rudder as long as you do not try to point too high or sail too slowly.

As soon as you get boots on the ground pull the other rudder up immediately (and before the sterns drift further towards the shore and/or the boat starts to move backwards).

6.1 Landing in high onshore winds

When sailing in windy and/or rough conditions the highest risk of boat damage will be when coming ashore at the end of your sail if the shore is directly (or almost directly) downwind (so that you cannot let the sails out at the last moment to stop the boat).

What constitutes windy conditions will vary depending on the experience and weight of the individuals involved but F4-5 is a good guide.

As stated previously it is not acceptable to come ashore by sailing the boat up the beach; this demonstrates poor seamanship, is very hard on the boat and is in any case unnecessary. If this is the only way that you feel able to come in to the beach in the prevailing or forecast conditions then please do not take the boat out in those conditions.

If the beach is directly (or almost directly) downwind, to get safely head-to-wind you would have to sail right up to the beach and turn away from it at the last moment so that (by the time the boat stops) you are still close enough to the beach to get boots on the ground. To go from downwind to head-to-wind you must drive the boat through the point where both sails will be drawing and producing maximum power, and if it's windy the boat will accelerate really fast in the turn - easy enough to control in a Force 3, rather more of a challenge in a Force 5. If the rudders hit the bottom and kick up (or you misjudge the turn and don't get head-to-wind) you may lose control of the boat which will get pushed onto the beach rapidly (probably stern-first which will damage the rudders). Please do not try to land in this way in a strong onshore wind!

In the following descriptions 'onshore' and 'cross-shore' are relative to the Club beach.

The direction and speed of the tide are key. A strong tide can be a big help if it is in the same direction as the cross-shore element of the wind. You can broad reach against the tide, lift the rudder closest to the beach and glide gently into the beach at walking pace until your crew can jump off.

However, if there is a significant tide running in the opposite direction to the cross-shore element of the wind (so that when the boat turns head-to-wind it must also turn in the same direction as the tide is moving) then stopping the boat initially and then holding it with the tide pushing the sterns in one direction and the wind pushing the sails in a different direction can be a challenge especially if there is a sea running.

Coming in at very low tide can also present problems. Our beach slopes gently until the low water mark at which point it drops off very rapidly. At low tide you may not have enough space to turn away from the beach and get boots on the ground before it gets too deep to stand, even in a light breeze.

A key message here is **please think ahead to when you will be coming back in** - check the forecast and tides and don't put yourself in the position where you could hurt yourself, your crew or damage the Club's boat.

In summary, a strong wind (F5+) with a significant onshore element will be a potential problem unless the tide is running in the same direction as the cross-shore element of the breeze and you can reach in against the tide.

If the conditions are not in your favour, the preferred option is to take the mainsail down and land the boat under the jib only. Apart from dramatically reducing the sail area and power of the rig it is also much easier to release (depower) the jib at the last moment. It's also much easier getting the boat up the slipway in a blow without the mainsail up.

Taking the mainsail down at sea is straightforward but is slightly different from doing it ashore. Proceed as follows:

- Find a location **up-wind** of the Club, out of the main channel, away from anything you might drift into.
- Heave-to by pulling the jib in on the 'wrong' side, letting the mainsail and traveller right out, and putting the helm hard over to keep the boat nose into the wind (put the helm up slowly to give the boat time to stop). The boat should sit comfortably without drifting too fast. If the boat is moving significantly relative to the shore try adjusting the jib in and out, or try heaving-to on the other tack, or just move the boat farther from the Club so you have more distance (and thus more time) to prepare. If it is really windy release the Cunningham as soon as possible to reduce mainsail flog. You may be able to wedge the tiller extension against the shroud to free your hands. Try practicing this a few times on days when you don't need it.

Once the boat is sitting comfortably:

- Release the Cunningham if you have not already done so.
- Pull out the mainsail halyard from the pocket on the trampoline and throw it over the side of the boat (this helps to avoid rope kinks).
- Release the spanner control and pull the rope out of the cleat on the boom.
- Unclip the mainsheet from the mainsheet strop.
- The next step is to get the boom off the mainsail, which means getting the clew line (outhaul line) disconnected, and the boom out of the loop in the mainsheet strop. Rather than risking leaning out over the back of the boat to do this, move to the inboard end of the boom, check that the piece of elastic holding the boom onto the gooseneck is in place, then pull the boom backwards off the gooseneck then forwards so that the outboard end comes out of the mainsheet strop. The clew line

(outhaul line) should also disengage from the end of the boom and pull through the clew of the sail.

- Lower the outboard end of the boom gently to the rear beam. Whilst the boom is off the gooseneck, pull the Cunningham rope loops off the gooseneck and through the mainsail tack, then put the boom back on the gooseneck again so that it does not clatter about on the end of the elastic.
- If you are struggling to get the end of the boom out of the mainsheet strop, or the clew line off the end of the boom, you can release the piece of elastic holding the boom onto the gooseneck to pull the boom further inboard **BUT** re-attach the elastic and put the boom back on the gooseneck immediately afterwards otherwise you may lose the boom over the side of the boat. If for some reason you do end up leaning over the back of the boat, do not rely on the boom to steady yourself - it could pull off the gooseneck.
- Pull the mainsail tack out of the mast track (you may have already done this to allow you to pull the piece of elastic holding the boom onto the gooseneck out of the mast track).
- Disconnect the mainsail sail lock by pulling on the main halyard to raise the mainsail slightly and simultaneously pushing the spanner towards the wind as far as you can; release the halyard and the sail should come down (you may have to pull it downwards to start with, and don't release the spanner until you are sure that the mainsail lock has released). Roll the sail as it comes down, controlling the rate of descent with the halyard. When it is down, leave the halyard attached but tie it around a foot strap (or use a part of a spinnaker sheet to do this). Leave the top batten in place until you get ashore.

Do not bring the sail fully down onto the trampoline and then roll it because if the sail goes over the windward side of the boat it will be dragged underneath and you will have a major problem getting it back in again without damage. If it goes over the leeward side of the boat and gets picked up by the wind you may end up flying it like a kite from the masthead.

For the same reasons do not try to 'flake' the sail on the trampoline rather than rolling it - the wind will get under it (probably at the worst possible moment) and cause a major problem.

Once the sail is down and secured you can sail to the beach in safety and comfort, but remember that you cannot go upwind without the mainsail. As always bring one rudder up before your final approach to the beach, and take 2 of the 3 elastic rings off the other rudder mechanism in case you do hit the bottom.

7. Sailing in Windy Conditions

What constitutes windy conditions will vary depending on the experience and weight of the individuals involved. For very light or inexperienced crews F4 will be a handful but F5 is a more common benchmark.

7.1 Upwind

One of the most common mistakes in windy conditions when sailing upwind is to try to depower the boat by letting the mainsheet out. Trying to sail this way is slow, uncomfortable and will make it very difficult to tack since the boat will lose drive from the rig as it heads up into the tack, causing the tack to stall.

7.1.1 Mainsheet and Cunningham

In windy conditions, the main way to depower the boat is using the Cunningham. Because the SL16 has diamond wires the mast does not bend much 'side to side' and the effect of the Cunningham is to cause the mast to bend 'front to back', flattening the sail and reducing the depth of the mainsail aerofoil and depowering the sail. The effect of the Cunningham is much

more pronounced on a boat with diamond wires than on one without (such as a Hobie 16 or a Dart 18).

Setting the Cunningham is an iterative process (at least until you get the hang of it). The target is to be able to sail upwind with the mainsail sheeted hard in (so it is one long aerofoil from top to bottom, nicely 'bladed out' with most of the tell tails flying), sheeting out only for gusts. In windy conditions 'sheeted in hard' for most people means 'as hard as you can'. High mainsheet tension also helps to bend the mast and flatten (depower) the sail more.

To set the Cunningham, sail upwind (trapezing if that's what you will be doing) with the traveller cleated fully in, pull the mainsheet in until the windward hull lifts, then pull the Cunningham on to get the hull back down again. Keep doing this until you can sail the boat with the windward hull just kissing the waves for most of the time with the mainsheet hard in, and you only need to sheet out in the gusts.

Please note that one effect of pulling the Cunningham on is to flatten the very bottom of the sail to the point that you may need to let out the clew line (mainsail outhaul). If this is too tight it will prevent you using the Cunningham properly.

If you want to sail fast upwind, try to keep the boat straight and sheet out in the gusts without luffing. It may be harder work but the best way to sail the boat upwind fast is to shift a lot of mainsheet. Don't be a 'lazy luffer'.

7.1.2 Other ways of depowering the boat upwind - traveller

Initially sail upwind with the traveller cleated right-in. If it is really windy (F6) you can let the traveller down 6" or so. The effect is to slightly alter the angle of the mainsail aerofoil to the wind, depowering the sail.

7.1.3 Other ways of depowering the boat upwind – mast rotation

On the SL16 the spanner is connected to the boom, so as the boom moves out so does the spanner, increasing mast rotation. The description in this section is for when the mainsail is fully sheeted in.

Initially, the spanner should be set so that the arm points at the shrouds. As the wind increases point the arm further aft until in really windy conditions it is pointing at the rear corner of the trampoline. The effect is to reduce the depth of the mainsail aerofoil, depowering the sail.

7.2 Downwind

There are 2 very important things to remember when sailing downwind in a blow. Firstly, keep tension on the mainsheet at all times since this acts as a backstay to protect the mast. The tension should be less than upwind, but still significant. Secondly (and most importantly) **NEVER** sail closely to windward of something hard (such as a boat, a mark or a sandbank) because if you get hit by a gust you cannot bear away and you will either hit it, or capsize on top of it.

The traveller should be cleated fully in or a couple of inches lower in windy conditions, and you can use the traveller to dump the main in a gust if you cannot bear away fast enough. Remember it's 'up to uncleat' with the traveller and 'down to uncleat' with the mainsheet.

For maximum speed take the Cunningham off downwind. Also take it off when you come ashore because it can cause the mast and sail to slat from side-to-side if it's windy.

If the water is flat the crew can trapeze from the foot strap at the back of the boat to keep the nose up, but be careful – it's a long way for the crew to swing forwards ('maypole') if you bury the bow and they lose their footing.

When hoisting the spinnaker in windy conditions, initially sail straight downwind with the mainsail sheeted in but the traveller out (if you are helming *concentrate on your course* - you do not want an involuntary jibe at this point). Once the sail is up, come up towards the wind

gently and squeeze the mainsail in on the traveller as the boat accelerates. The crew needs to be ready to sheet the spinnaker in as the boat moves faster and the apparent wind moves further forwards.

Be ready to bear away as airflow establishes around the front of the spinnaker and the boat accelerates; if you do not bear away you will capsize. Eventually you will learn to sail a series of graceful 'S' shapes as you keep the spinnaker pulling at its maximum without overpowering the boat.

To trim the spinnaker the crew should be continually easing the sheet until the luff curls, then sheeting in to stop the sail collapsing; the intent is to keep the sail producing the most drive forwards and the least drive sideways (least heeling effect). The crew should also be ready to sheet in when the boat accelerates and sheet out as the boat bears away, or slows down after a gust has gone through.

Keep the boat balanced fore-and-aft; watch where the water line sits on the lee bow.

8. Using the Spinnaker in Lower Wind Conditions

When there is plenty of wind the course that you sail at any point in time (assuming you want to go fast) will be dictated by the power generated by the spinnaker (you will be treading the line between keeping the sail fully powered-up, but not so much that the boat capsizes). Conversely in low wind conditions you must sail with the apparent wind on the beam of the boat. The difficulty comes in deciding when to swap between 'power' mode and 'wind direction' mode.

The reason this is difficult is that in mid-range conditions it is easy to head up, power up the spinnaker and get lots of speed, but end up so close to the wind that you just reach up and down almost in a straight line and do not make much progress downwind. Fine if you are just out for a blast, but not so good if you want to get downwind.

Deciding when to swap modes comes with experience. The best way to start in lower wind conditions is to try to sail with the wind on the beam, and try coming-up a few degrees. If the boat goes much faster and you can bear away onto (or below) your previous course then keep going. If the boat does not go much faster, accept that the wind gods are not smiling on you today and sail on wind direction alone.

Another give-away is how far-in the spinnaker is sheeted. If you can only get good boat speed with the sail sheeted a long way in, chances are you should be switching modes.

A couple of streamers (cassette tape is good) attached to the bridle wires can be a big help with apparent wind angles.

Happy Sailing!

Richard Golden

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