



PHOTO RICHARD PAGE

Jib trimmer

It's one of the most technically demanding jobs on a big boat, but a good jib trimmer can keep your boat changing gears. **Harriet Prest** gets some expert advice on headsail trim.

No matter how many crew a big boat sails with, there will always be one specified crewmember in charge of jib trim. In some cases they may also trim the spinnaker downwind and they will usually have at least a second trimmer to help during tacking (maybe the spinnaker or guy trimmer). Regardless, the jib trimmer takes overall responsibility for the sails onboard.

So, if you're stepping onto a new boat, or moving up to a 'Trim 1' role, you need to know what to expect. And there are few people better to advise than Simon Fry, sail co-ordinator and an onboard trimmer for GBR Challenge; grand prix consultant for North Sails UK and a member of the world champion TP52 'Patches' crew.

Be prepared

Before leaving the dock, the trimmer needs to have a mental checklist: Are the battens in the headsails? Are the genoas 'race-packed' – meaning the sail is flaked so that the luff is stacked at one end of the bag with the head easily accessible for a speedy plug-in and hoist? Have the winches been recently serviced? Are the jib cars running smoothly? Have you got spare telltales?

If it is your first time as trimmer on that particular boat, find out if there are any notes or pearls of wisdom relating to the boat's sails such as, 'the medium jib can be sailed with much more twist in it than the light'. There should be a tuning guide from the sailmaker and there may also be a 'target sheet' (see page 11) showing upwind and



PHOTO: RICHY PAGE



downwind sail selections, plus target speed and angles, in various windstrengths – these should be laminated and taped onto the bulkhead when racing.

Trimmer talents

So who makes a good jib trimmer? 'You have got to be a good natural sailor. You have to have a flair and a feel for the boat, for the angle of heel, how to set up the boat, and for what the driver is looking for,' says Simon. 'There is something intuitive – you might ease the sheet 5mm, and that will be the difference between the boat performing and not performing. Most of the top trimmers have had a really good dinghy or keelboat background.' If you don't have that dinghy background, Simon advises: 'You need to learn. You need to be able to sail a Laser around a course and understand what the boat needs or requires to be a good trimmer.'

On a big boat, the feedback is disguised, compared to the instant feeling in a dinghy – if

you really can't get some dinghy sailing in, then try sailing with all the instruments turned off, this will make you 'feel' the boat rather than sailing to the numbers.

As with all positions on a big boat, it is important to be a team player. 'You need to be able to convey how you want the boat to be set up and you need to have a real empathy with the helm and the mainsheet man.'

Imagine a racing boat as a series of communication loops. Simon explains: 'For instance, the tactician might say to the driver, "We're lifted, I want to go two tenths quicker and get across the fleet", so then the trimming loop has to respond to that. And it may well be that they need to change sails so that is when they integrate with the crew boss and he then organises the manoeuvre.'

Constantly trimming upwind (and often downwind as well), the job is an exhausting one. Your concentration levels need to be good. Simon trims on a TP52 and, although he quips that it's 'better than a day in the office', he admits, 'You switch on and that is it. Only at the end of the race do you switch off. It's an intense job.' It can

Above Downwind don't just switch off: keep an eye on the wind strength in case you want to change sails, and make sure the sheets are run.

Left No matter how big your winches, the principles are the same – have enough turns so you can ease and trim on tiny amounts in control.





Above Coming out of tacks the jib shouldn't need skirting, sitting just inside the guardrails as you trim back on.

Below right In waves helmsman will require a less fine entry, or wider 'groove', to steer to.

also be a wet job, if you are down on the leeward rail trimming at times – but don't stay down there for the whole beat, it's not fast!

In control

You need to understand how your sails work and that you have the right sails for the job. Simon Fry believes that talking with your sailmaker is the best option, 'There is no point having sails that are very, very rig sensitive or sheet sensitive on a weekend boat. It takes away the crew's enjoyment and it's an inappropriate product.'

Ask yourself what type of boat am I sailing – light or heavy displacement? For a light boat, you will probably need a flat set-up and, for a heavy displaced boat, you will need the extra power created by a deeper set-up.

The jib controls include: halyard tension; forestay tension and jib car position. Many sailors have marks on the controls and always set up the boat in exactly the same way. This will work for a while, and for a medium windstrength, but it does not take into account the fact that sails will stretch and that if you don't actually look at what you are trimming, the process becomes very automatic. Instead, understand how each control affects the sail:

■ **Jib halyard:** controls the luff tension. 'As a general rule of thumb, the luff of the headsail wants to be tight enough so that it just takes the wrinkles out of the sail along the luff tape. Naturally you'll want this to be tighter in breezier conditions and looser in lighter conditions'. In breezy conditions you are trying to move the centre of effort forwards on the boat and depower the sail by making it less baggy – and the opposite for lighter conditions using deeper sail shapes.

When trimmers talk about the 'slot' between the mainsail and jib, they mean that the two sails need to be the same shape to give a balanced exit point for the breeze between the gap. So, if the main controls are on tight, the jib needs to reflect that. As you pull on the halyard, you move the draft of the sail (the horizontal curve) forwards so that the front of the jib becomes rounder or 'blunter'. The back of the sail becomes flatter. The opposite occurs in light airs as you ease halyard off. Simon explains why this makes a difference: 'One of the things I might say to the driver is, "is the jib to fine to drive to?" The more accurate the driver, the finer the entry they will get away with, but it may be that the sea state means that the bow will move around a lot so that you cannot get away with steering with an entry that is that fine.'

'At GBR Challenge we would have a running log of our sail shapes to scan our sails. We were always looking to get the draft between 40 and 60

Asked to trim jib on a big boat? Here's our cut-out and keep guide...

Key points

- **Dockside:** you are responsible for the sails so have a checklist: Are the sails race-packed? Are the winches and jib cars all sound? Talk to the other crew members for any advice, and check for laminated target sheets on the bulkhead.
- **Sails:** talk to your sailmaker. He should provide tuning guides and help you understand how particular sails perform on that boat.
- **Controls:** halyard tension, jib car position and forestay. Familiarise yourself with how these are adjusted on the racetrack and have a chat with the pitman to ensure that your line of communication is clear on this.
- **Trimming:** use the telltales! There should be plenty of 'woolies' on the genoa and as a general guide you want them streaming horizontally at perfect trim and to break at the same time or from front to back.
- **Dialogue:** keep everyone talking. During the tack get someone to call out the boatspeed while you focus on getting back to full speed.
- **Tacking:** this is your manoeuvre! So make sure it runs smoothly. Take responsibility for the hardest part – the let-off – then take a winch handle up with you to the new sheet.
- **Sail selection:** give the breeze a chance to settle before calling for a disruptive sail change. Try and make all changes during the downwind leg wherever possible.



per cent. Entry angles are key. Look at the stripes horizontally on your sail. All trimmers should do this: take pictures of the sail then get onto a computer and look at what you were using.'

■ **Jib cars:** adjust the jib sheet lead position. 'The position of the lead controls the tension on the leech and foot of the jib as well as the draft location in the upper third of the sail.' So, if you move the jib forward, the leech goes tighter and makes the foot of the sail deeper. This is a good set-up to power up the jib in lighter breezes. On the flip side, when it's blowing, move the car back, tighten the foot and the jib will flatten. Simon explains how to know if it's set up right: 'Use the telltales - all you need to do is to locate which portion of the sail luffs first (windward telltale lifts). If the sail breaks or lifts in the upper portion the jib car should be moved forward. If the sail breaks in the lower portion, the jib car needs to be moved aft.'

■ **Forestay:** controls rake. 'One of the ways you cajole the rig into being good across a range of conditions is that you control the rake. So if you go sailing on your J/109, your rake is set at 2.2m, which is a good base setting. If you are going to sail in more breeze you may shorten the forestay by 15mm. If you do that, it changes the geometry of the sail plan. Pen marks will mean nothing for the pitman as the halyard will be 15mm out.' So, by using either the backstay, or an adjustable forestay, to control the tension, make sure that the mast rake is correct before you start adjusting all other controls.

Trim on

'It is always worth remembering that the jib sheet is still the most powerful control and has the biggest effect on the sail.' Telltales here are of massive importance; 'If the boat is perfectly set up, let's say all the telltales are streaming on the windward side of the jib and on the leeward side they are horizontal. When we talk about which side of the jib is lifting first - luffing - it is when they go vertical.

'Get your driver to help, say "I really want to

Crew like you...

...amateurs share their secrets

■ 'The aim is to ensure the boat continues to travel as quickly as possible through the tack and gets back up to speed in the shortest possible time. Take all the slack out of the old sheet and insert a winch handle, then make sure that the old sheet will run free. Do not ease the jib too early. Watch the boat angle and speed to ensure the jib is not overtrimmed coming out of the tack.' Kirsty Apthorp, jib trimmer, J/105

■ 'I've always used a marker pen on the jib sheet - I usually mark just above the jib car block so that it is visible - it rubs off easily so if you change any settings you can just go to a new mark that works for the new setup.' James Mitchell, jib trimmer, Mumm 30

just monitor the telltales for just 30 seconds. Can you luff up and then bear away to angle and then go too far?" When they are luffing the sail is lifting and if we bear away the tales inside will droop, the sail is over-sheeted and you haven't actually got flow over the sail. The secret is to get the ones on the luff to break at the same time and then the others should fall into line - remember, you can't have too many telltales on your sails!'

When trimming, repeatability is important: 'If you have a fast setting, it is almost a case of taking a picture in your mind, and then being able to go back to it, time after time. The best trimmers will be able to hit that setting straight off.'

Use your instruments to help you. 'For the jib trimmer, the most important instrument is probably the log. Speed is everything. On a typical set of dials I'd want to have true wind angle, apparent wind angle and true wind speed and boatspeed. You are looking at speed to get the boats to targets.'

J/109 No Naked Flames

Upwind

Headsail		TWS	TWA	Target boatspeed
L/M	L/M	4	50	3.59
L/M	L/M	6	48	4.89
L/M	Heavy	8	43	5.72
Heavy	Heavy	10	41	6.16
Heavy	Heavy	12	40	6.39
Heavy	Heavy	14	39	6.52
Heavy	Heavy	16	39	6.63
Heavy	#3	18	38	6.72
#3	#3	20	38	6.78
#3	#3	22	39	6.81
#4	#4	26	39	6.86
#4	#4	26	39	6.86

Left Your sailmaker should be able to provide target sheets for upwind and downwind, showing sail selection, and target boatspeed at different wind ranges. Have a laminated sheet clearly visible in the cockpit.

Tacking tips

The most important manoeuvre that the jib trimmer is involved in is obviously the tack. Simon has his preferred way of running them: 'I think that the principal jib trimmer should do the cast off. When a tack is called it is really important that you tell the driver or the tactician that you are ready, so they say "Standby to tack", and I will just say "Clear!", as I'm on my way down. For the jib trimmer the tack starts at the point of the let-off – you need to understand how to let the jib off. On some boats you need to back the jib and some you need none – there is no rule for that, it's boat-dependent, linked into keel and rudder size – you need to get out there and find out. The other thing is whether you are sailing with non-overlapping or overlapping genoas. The skill in letting off an overlapping jib is very different. It's much easier with a non-overlapper – and you're less likely to put the spreaders through the jib!'

So what's the trick to letting off an overlapper? 'You have to feel the boat coming into the wind. You have got to be ready to initially ease and then strip your turns. You are looking to let the clew blow through onto the leeward side and pass outside of the leeward guardrails so the tailers can snap the jib in and the driver can fall onto the jib and sail away. This is one of those positions where fortune favours the brave. You can't go into it and be tentative. The bigger the boat the more difficult it is. On a big boat you have to take one turn off, another, slip a little and then as the bow comes up, the headsail backs slightly. That's when you have to slip your turns.'

Then either the lazy trimmer tails the jib sheet, and the jib trimmer just drops down to trim the sail. Simon says that the rate of turn is key. 'If you imagine you come along in your J/109 and you go into a lovely tack. Jib let off, jib pulled on perfectly, and then the driver comes

tack. It focuses the mind. As you go into the tack, if you know your targets. Say you go in at six knots, sailing in 16 knots of breeze, target is six knots. You tack, jib goes on. The lazy trimmer calls, "Numbers dropping, 6.2. 6.1... 5... we've dropped to bottom. Numbers on the build, 5.1, 5.2..." You know you can trim on whilst watching the telltales as you know the speed is coming up. Then you need to let the driver know you are at final trim when the speed is back to target. Just say "that's final", let him know that he is at his upwind setting. From then on, be proactive. Don't wait to be asked to make a change.'

All change

The other aspect a jib trimmer should always be aware of is sail selection. Downwind, you should be looking at the breeze, considering any sail changes whilst the jib is on the deck.

'On an overlapping boat you are likely to have a light, medium and a heavy – roughly the same size. The heavy is normally a bit smaller. The heavy will be flatter, more draft forward, flatter at the back, the medium will be a fairly balanced sail and the light will be quite fine entry, quite deep and round.' Talk to your sailmaker and make sure you understand what breeze each sail performs in.

Regarding changing sails mid-race, Simon says: 'The first thing you apply is your cup of tea rule.'

'Folklore has it that the "Cup of Tea Rule" goes back to "Steinlager" in the 1989/90 Whitbread Round the World Race, where the rule on sail changes was: if you thought the breeze was increasing, or dropping off, put the kettle on and have a cup of tea for five minutes because invariably there will be a fluctuation or a change. If it is still changed and looking pretty stable after you have had a cup of tea then go into the sail change straight away. Unfortunately on a lot of boats you don't get a chance to have a cup of tea!' ■

“ Try sailing with the instruments turned off – this will make you 'feel' the boat ”

out 20 degrees too low – you've got to ease the jib. You've got to build speed and then come back up. Accuracy of exit angle is key to tacking. If the driver exits low, the jib trimmer needs to let him know.'

A final word on tacking: 'If someone has to skirt (pulling the foot of the jib from where it is stuck on the outside of the guard rails) it is not the bowman's fault, it is driver's or let-off and tailing-related. Half the reason jib trimmers sound stroppy with bowmen is that they know they have messed up and the bowman is having to get them out of the soup!' Once out of the tack, it's all about building speed and height, communicating with the helm, mainsheet trimmer and afterguard. 'The dialogue on a grand prix boat is the thing that most surprises club sailors. If we come out of a tack and we are a little bit low. The first thing you will do is ease the jib so that you are not stalled. And then you talk to the driver.

'Have someone calling the speed out of the



PHOTO STEVE EMERY

Above Find a way of balancing securely on the leeward rail.

Below Going into a tack, the first trimmer should go down to 'cut' or release the jib, while a second trimmer first pulls the lazy sheet through then tails as the sheet is winched on.



PHOTO RICH PAGE