

THOSE MAGNIFICENT MEN & THEIR FLYING MACHINES

They go up, tiddly, up, up. They go down, tiddly, down, down. They enchant all the ladies and steal all the scenes

So how do we do it?

How is the pro racer so magnificently faster around a course than a keen amateur/freerider?

Here at INTuition HQ I've often told my guests of the 3T's- Tuning, Technique and Tactics, the 3T's that truly make the difference to your speed. Today we look at one small area of one of the T's- Tuning.

To get your board into warp speed, you'll need to get it really flying. Yes, literally flying, with only a few millimetres of it touching the surface of the water. If too much of your board is touching down, then there's too much drag to truly hit warp speed.

10/10

Given that you have already chosen the right sail, mast and boom for your speed sailing, then you are left with no fewer than 10 tuning features to tweak your engine:

Downhaul, outhaul, boom height, mast track position, fin size/type, harness line length, harness line position, harness hook position, footstrap adjustments and batten tension.

I try and give myself ten out of ten for tuning these, what do you give yourself? What if you only tune 2 or 3 of them? Or what if you were a pro tour racer who had different fins for every sea state, every sail size and every course shape- amounting to no less than a 50 strong quiver? What would happen if you just scored one of these ten points?

The rise and fall of the windsurfer

Let's focus on just one aspect of tuning to make you go faster this month-

The 'up, tiddly, up, up' and the 'down, tiddly, down, down' or in sensible terms, the rise and fall of your board.

Speed objective-

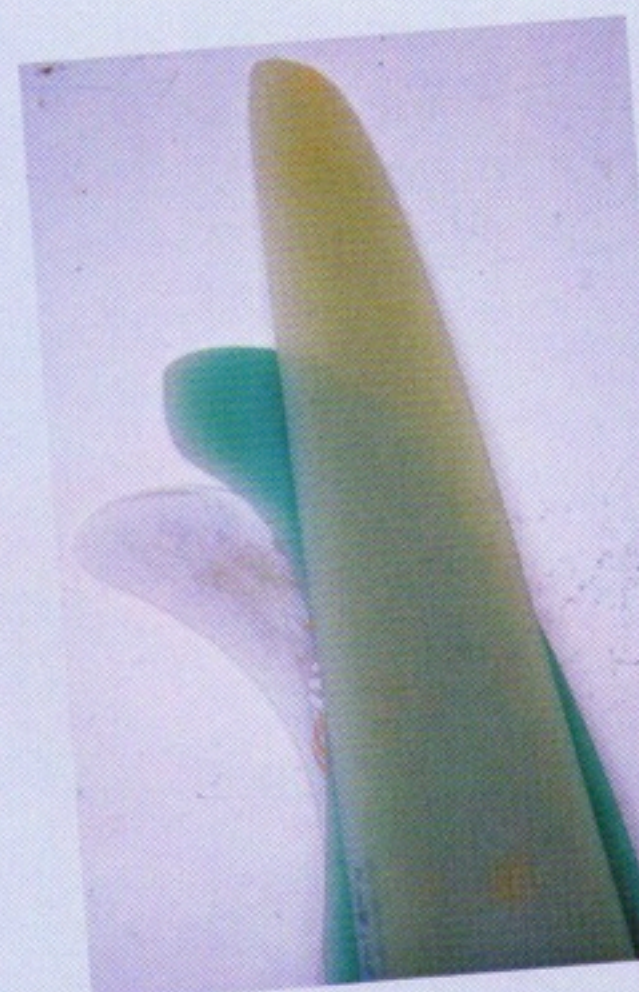
Sail your board literally "off the fin," so as little of your board as possible is dragging on the waters surface.

There are restrictions in case you were thinking of using hydrofoils or 100cm fins. They don't have sufficient handling characteristics to sail fast while miniscule boards cannot get you planing early enough. So working with the tools we have available, here are the tuning tips that can turn your board into a flying machine. They're aimed mainly at advanced windsurfers but there are also some enlightening tips for intermediates.



Technique by Guy Cribb

INTUITION SPEED/SLALOM



FINS - ON THE STRAIGHT & NARROW.

A bigger fin creates more lift than a smaller fin and different fin shapes and constructions are suitable for different things. In general terms a straight and upright fin is very good for straight line sailing while a curved fin is very good for

'curved' sailing like wave sailing, or gybing. Most freeride fins have an upright base for good blasting and a curved tip for improved gybing control. Since your fin is always in the water it will restrict your top speed.

The chord of the fin is the measurement from leading edge to trailing edge. This is where much of the drag is so it figures that upright fins tend to have a narrower chord so less drag. No surprise then that most slalom dedicated fins are straight and narrow, but you can be surprised at the cost - over £200 each! So when it comes to dedicated speed or slalom sailing, fin choice will make a large difference. If you're an average windsurfer, in order to sail faster than your friends, you may, surprisingly, need to use a bigger fin than you think, despite the increased drag.

Fin up -

The world slalom and speed champion Antoine Albeau uses a 40cm fin with a 6.7m sail in around 30 knots of wind and can blast at over

40 knots on the open sea. I should know as I followed him across the English Channel.

An accomplished freerider who can regularly gybe and can sail frighteningly fast on a broad reach would probably use a 35cm fin with a 6.7m sail, in 17 ish knots and hit peak speeds around 25 knots.

Around the race course, where acceleration is so important, upwind performance is necessary for overtaking and top speed is crucial, the longer thinner fins will help get you going and maintain a high top end speed.

As such my basic fin recommendations for regional and national level slalom sailing for anyone who is only going to have one slalom fin per sail size are the following:

9m- 48-50cm on 85cm ish wide board
8m 43-45cm fin on 75cm ish wide board
7m 38-40 fin on 65cm ish wide board
6m 32-34 ish on 60cm ish wide board

Freeriders who want to step up a gear, get as close to this as possible and consider this, spend more money on your light wind fins as you will probably use these most, and the lighter winds are where tuning and cheque books are more important.

Fin summary-

A popular misconception in windsurfing is the action of putting in a smaller fin to reduce drag will make you go faster. This is not always the case because you need the lift from the fin to lift your very draggy board out of the water. Consider this - what's got more drag, 4cm more size on your fin? Or 100 square cm of drag from

the underside of your board? Try a longer more upright fin for improving your speed around a course, or just to and from the beach against your mates. The increased lift should get you planing earlier, allow you to sail upwind of your victim and lift your board right out of the water for minimum drag.

Disclaimer: Severe cramps and burning of your leg muscles are part of the course of sailing faster

Only when sailing in excess of 35 knots (dedicated speed sailing on speed courses) do you need to really consider using much smaller fins to reduce drag, and this only applies to a fraction of the world of windsurfers.

(Wave, freeride and race fins)



Downhaul.

Downhaul is one of, if not, THE most significant tuning feature of your windsurfing kit and in general terms more downhaul = more good things, whoever you are and in every wind strength.

For the highest performance levels of fast freeriders and racers, note that-

More downhaul will reduce the amount of downforce onto the mastfoot and therefore allow you to sail the board more out of the water (so long as you are powered up.) Less downhaul increases downforce onto the mast foot sailing the board flatter. So increase your downhaul if you want to turn your board into a flying machine.

NOTE this tuning advice is strictly for people already using enough downhaul, which is usually around 20% of windsurfers. And the disparity between more and less downhaul is only around 15mm of adjustment.

Check out this image for an idea of how much downhaul is used- check out the twist in my race sail at over 30 knots!

Boom Height-

The tuning effects of adjusting your boom height are the same for an intermediate as they are for an expert. Assuming your starting point is correct (somewhere in top half of your cut out, regardless of your body height)- Raising your boom takes weight off your front foot, and distributes it between mast foot and back foot. Lowering your boom increases weight onto your front foot.

To help lift the board up out of the water, raise your boom height. This naturally loads up the fin and your back leg more and also improves your early planing. It also helps prevent the windward rail dragging. It does not however, by any means improve your control! Be warned, in overpowered conditions, quickly start lowering it.

Mast Track

The mast track directly controls the amount of control you can have from a board.

Moving the mast foot forwards increases the amount of the board in the water, creating more drag which basically gives you control, but slows you down.

Moving the mast track back reduces how much board there is in the water, thus giving less control, but more of a flying sensation and speed.

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SPOT THE DIFFERENCE?

Answer on bottom of page



SUMMARY FOR ALL MAGNIFICENT MEN & THEIR FLYING MACHINES.

When I'm out blasting on my slalom gear, I will usually tune my kit as follows-

Crank the hell out of my sail with loads of downhaul- too much is better than too little and it is usually easier to let some off than to crank more on later.

Adjust my outhaul frequently with an adjustable outhaul system on the water.

If the sea looks choppy start with my track quite far forwards and boom mid height.

If I'm happy with the sail tuning- enough downhaul and correct outhaul, then I move to boom height and mast track within a couple of blasts.

If I'm a bit underpowered or the water is quite flat, my boom will go up.

If I'm overpowered the boom will come down.

I then start edging my mast track back, and back and back, about 5-15mm at a time, until I find the point where I am only just in control. This point may well be further back on my board that you'd feel comfortable with. I also evaluate the situation- if I was racing and the race is only going to last 5 mins, I only need to tune my kit to be sailable for five minutes. It's not like I need to cross the channel with it, when I'd just be tweaking everything for control and comfort.

Once my board is sailing perilously close to tail walking (when the nose lifts high out of the water out of control) then I am happy I've turned my kit into a magnificent flying machine.

Then it's time to work out whether the extra few percent of top speed this will give me is a worthy trade off against the loss of control I will have when entering gybes. Depending on the level of competition and what is at stake, I will usually just nudge the track forwards a fraction to compromise a little speed for control.

Now I can confidently go for all the killer overtaking moves and hurtle recklessly around a race course to "enchant all the ladies and steal all the scenes."

For more info about Guy Cribb and INTuition Coaching and instruction please visit www.guycribb.com

For more info about regional and national slalom racing visit UKwindsurfing.com

Guy Cribb INTuition Britain's Professional Windsurf Coaching

Cribby runs windsurfing courses all over the world all year round for the discerning traveller who insists on maximising their time on the water and their windsurfing development (combined with non stop awesome socials!).

As such five of the first six courses for 2010 are already fully booked, with only a few places left for the Hawaii wave clinic April 10-24 and his gybing clinics in Greece in July. For more info or anything windsurfing, please email guy@guycribb.com

Answer from spot the difference- Boom height is higher in one of the images and as such the board is riding more off the fin.