



# Sailing Tips by Chris Kitchen

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## Series 5 – Upwind Sailing

Although there are probably more speed gains round a track to be made downwind in a Weta compared to upwind there are still many things you can do to put you in good shape at the top mark. Like downwind there is an art to mastering the balance of the Weta and fine tuning its simple controls. Although there are very few controls/adjustments per sail (Main and Jib) compared to most other boats this means that the fine tuning of these is even more important to get right when sailing the boat.

A lot of it comes down to feeling the boat and what needs correcting. I really encourage having a bit of fun and playing around with exaggerated adjustments to get a good feel of how they affect the boat. For example sailing at the very back of the boat or sheeting on much harder than you ever would and just see how the boat reacts.

I am always learning about the boat and how to sail it better and some of the latest developments have come in the last 2 months. Whether you are eyeing up the local title or perhaps looking at getting back from your picnic spot a little quicker I am sure there is something here for you to pick up.

### 1. Steering - Driving for speed

Like I mentioned in the report from the European regatta it is super important when sailing the Weta to maintain speed. This is done by pressing on the jib. Provided the jib is correctly sheeted (see Jib sections below) then you should sail so the tell tales are flying and the windward hull is out of the water. As soon as the boat feels like it is fully powered and moving fast through the water you can pinch up a little and take height. As soon as the boat feels like it may be slowing a little (whether due to waves or wind) bear off slightly to maintain pace.

Really try to avoid pinching and having the windward hull drop in the water. This will kill speed instantly. The helm movements I am referring to are very small and may not be completely apparent to an observer. It is about feeling the boat and reacting instantly to the changes in wind, waves and power.

As a rough idea I will adjust the trim of the sails in wind changes of +/- 5 knots or more. Otherwise all adjustments are done through the helm as steering a powered course as close to the wind is most important.

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## 2. Mast rake back

Mast rake back is fast. One thing I have learnt in the Weta this past year is the further back I put the mast the faster I go upwind. I adjust the rake to the point where I have a small amount weather helm (weight on the rudder) on both tacks upwind when the sails are trimmed correctly.

To get started I would put the side stay on the 3rd hole up from the bottom as a starting point then go for a sail. If you feel that you do not have any weather helm the drop it down a hole.

Just remember it is possible to have too much mast rake back so be sure to consider this, the signs when there is too much mast rake back, include a boat that rounds up very easily and a very heavy helm.

## 3. Reasonable amount of rig tension

I like to sail with plenty of rig tension on the Weta. A couple of main reasons here...

- In choppy conditions it helps 'lock' the boat together and keep the platform rigid and there is less likelihood of the rig shaking around disturbing the flow over the sail.
- There have been some incidents of the t-ball stay terminals falling out of the mast when a boat has slack rig tension.

Traditionally the theory goes that more rig tension depowers the boat and less rig tension powers up the boat. This is because rigs with diamonds/spreaders bend more when compressed – therefore flattening out the main sail. Because the Weta does not have spreaders and the leeward stay is does not have much tension when powered the theory does not apply with the same influence.

A loose rig also means the rig will 'flop' forward downwind which is usually faster. Because the Weta sails more off the gennaker and steering/sheeting is key, mast rake has an insignificant effect. See 'downwind tips' for more on sailing fast downwind.

## 4. Batten tension on

Give all battens good tension. Not so much that they will not tack and look like the ribs of a hungry dog, but enough so there is some shape in the sail. The Weta sails are pretty flat and in most of the wind range we like to help get some shape in the sail.

As the breeze increases the sail can easily be flattened by pulling on the downhaul which depowers the top half of the sail by bending the mast tip and taking our all the shape created by the luff curve.

In lighter winds people have worried about the 'hook' in the leech from having too much batten tension. I have found that by easing a little main you can open up the leech plenty enough and the shape the battens give the sail help drive the boat. Only problem with too much tension is popping the battens through in a tack. The technique for this is to go through the tack, stay on the leeward side and once on the new heading give the mainsheet system a good pull. I find





its easiest to hold on between the block/cleat and the clew and giving it a good tug.

## 5. Jib Halyard tension on

The Weta likes plenty of jib halyard tension. You have a lot more to lose than gain by not having enough. In lighter air you can afford to have slight 'scalloping' between the jib hanks. As the wind increases you need to pull on enough halyard so there is no 'scalloping' between the hanks. When it is 18+ knots I generally pull maximum tension on – enough so you can see wrinkles/tensions lines running up the luff of the sail. This will help with height when sailing upwind.

See the rigging tips on how to set up a 3:1 purchase system so that it can easily be adjusted on the water as it is not uncommon to need to pull more tension on between races.

## 6. Jib sheet tuning

The Jib setup sets the platform for a fast boat. Because you steer off the jib tell tales, you need to trim the sail right. Firstly it is a good idea to double check the jib tack position as this will affect the adjustments you make. The standard set up (from the factory) will have either the eyelets and lashing which are on older boats or a dynex strop holding the bow ring off the bow. It should be positioned approximately 50mm above the deck. If it is higher (due to some modification or re-rigging) I suggest adjusting it so when the rig tension is pulled on the ring sits 50mm from the deck. Once you have the tack position and the jib halyard tension set you can focus on the jib clew sheeting position and sheet tension.

The clew sheeting position is the hole you tie the jib sheets to. General rule is light wind use the aft-most hole and as the wind builds move the sheets forward. This is a general rule and used as a guide only. I usually find I start on the second hole from the back and use this up to 15 knots.

## Light Wind

What you are looking for in the jib in light winds is a twisted leech that has all tell tales flowing. Use either the aft most clew hole or the one in front. Sail on a close hauled course with the lower tell tales flowing and adjust the sheet until all tell tales up the sail are flowing. If you find that the sail feels a little stalled then you can either ease some sheet to open the leech. If you find that in doing this you are losing height compared to other boats then you can put the jib sheets forward a hole on the clew and maintain similar sheet tension.

You are always better off under-sheeting the jib in light winds and keeping flow and the boat moving forwards as opposed to pinching.

As you get speed the foils work better and you get more lift off them giving you height. So you should always build speed and then go for height, rather than trying to pinch straight away when you don't have much height.



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## Medium Wind

This is similar to light wind sailing however you will be running more sheet tension. Attention should be paid to fine tuning of the jib sheets. A matter of 3mm sheet adjustment can have a significant effect on the jib leech profile. I constantly play with this to see what feels best as a trade-off of between height and speed.

I generally focus on pulling on as much jib sheet tension I can without the boat feeling like it is stalled. Try stalling the boat to see what it feels like – you will definitely notice it! It is good to be aware of what this feels like so when you do it in a race you know what is going on.

## Heavy Wind

Once the boat is getting overpowered I begin pulling downhaul on the mainsail and I move the jib clew position forward a hole. This opens up the slot a little more. A telling sign that you need to do this is when the luff of the mainsail starts to backwind a little due to the disturbance of the jib. Sometimes this can happen in Medium winds too. Once it is 25+ knots you will be in the front clew hole. If you are still overpowered then you can begin easing the jib sheet.

## 7. Main trim

Once the jib is all trimmed you need to focus on the main sail trim. Because the boat has no boom or vang it is sensitive to the amount of mainsheet tension as this sets the sheeting position and leech and foot tensions.

The clew board setting is just like the jib. Having it at the aft most position puts more tension on the leech and less on the foot of the sail effectively powering it up. The opposite applies. I always have the main in the aft most hole up until approximately 15 knots then I put it in the middle hole and in 22+ knots I am in the forward hole.

I would recommend playing around with the main tensions a lot while sailing. Try over-sheeting the main and see what happens and how the boat feels. Try under-sheeting and see how the boat feels. This will all help you understanding of how the boat reacts to different settings and what the indicators are for change.

I generally tune the mainsheet so the tell tales are flying all the way up the sail. If you are over-sheeted you will see the leeward tell tales at the head of the main will be stalled. If you are under-sheeted you will see the windward tell tales at the head of the main will be stalled and the sail may be luffing a little. If you find that you cannot tune the sail with sheet alone then you may need to change the clew position.

## 8. Cunningham

I used to be a fan of not touching the Cunningham until I was well overpowered as I had the theory it helped keep shape in the main to get height. As I mentioned in the European report a fellow sailor was using a little cunningham in 12-18 knots and had plenty of height. I came to the conclusion that he was just flattening out the head of the sail



reducing drag, but the lower half of the sail was unaffected so the leech of the main was still giving enough drive for lift. I now begin to pull a little cunningham on in 15 knots and gradually pull it on until it is maximum at around 25 knots. If you find that you lose height when pulling on Cunningham check there is enough tension in the bottom 3 battens as this may be a cause to lose shape in the leech which gives you height. If you are still struggling with height try putting the clew position aft a hole if possible.

## **9. Roll Trim**

Upwind I always have the windward hull flying to reduce the surface drag. Until the boat is powered and I am on the windward rail I try to have the leeward float just touching the water while still sailing a reasonably high angle upwind to reduce the drag of the boat through the water, with minimal press reducing the drag.

As the boat powers up and you are sitting on the windward rail I steer so the leeward float is semi submerged in the water. Again you will need to get a feel for this by experimenting with too much and too little heel and see how the boat reacts. As a rough guide I have the leeward hull submerged so the water line is just above the horizontal join in the floats. This gives the best balance between righting moment (giving sail power and therefore drive) and drag (working against drive).

Roll trim is adjusted by body position until you are fully powered and sitting on the windward rail. At that point it is then controlled by steering. The higher you go the flatter the boat becomes and the lower you go, the more the boat powers up, the more it heel over.

## **10. Weight fore/aft**

Another factor that is good to play around with and experiment and see how the boat reacts. You want to position your weight fore/aft so there is minimal hull drag through the water. The best indicator for this (apart from feel) is looking at the wake/bow wave of the boat. Try moving your weight and see how it changes.

### ***Light Wind***

In general the light wind the Weta likes to have weight forward. Try sitting in the central hull at the front of the cockpit just behind the mast. As the wind increases and you move weight outboard keep weight forward near the front beam.

### ***Medium wind***

Once you are on the rail the best sitting position is just behind the side stay. If there are a few waves and you feel the





bow is digging in a little and the waves are really stopping the boat then shuffle back a little.

### **Heavy wind**

When the wind is over 18 knots the boat likes to have a little weight aft. That would be approximately 30cm back from the side stay. If you find the bow is dragging a little then shuffle back a fraction.

### **11. Get a good furl on the gennaker**

For those die hard racers out there who are looking for the extra 1% edge on the race course you can get a little help by ensuring you get a nice tight furl on your gennaker. This will reduce the windage on the sail when sailing upwind and help speed. This can be achieved by sailing directly downwind when furling the sail and holding a little tension on the gennaker sheet. Having a continuous furler will help as you can get more wraps on a tight sail. It is good to practice this at the bottom mark as it sets the sail for the next windward beat. If it is a long course then it will obviously make a bigger difference.

### **12. Tight trampolines**

Although it does not make a massive difference I always like to ensure the trampolines are super tight. This just means that when you are moving around the boat it is stable and steady to manoeuvre. It also helps when fine tuning sheets etc that there is a stable platform to be adjusting from. Sometimes when the lines get wet and are loaded up (sitting on tramps) they can relax slightly. I will usually tension them up when on the water after sailing around for a little while. The 3: purchase at each side does help to get the extra tension.

**Find more tips and tricks from Chris here**

**<http://www.wetamarine.com/sailing-tips-by-chris-kitchen.html>**

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