

Supernova Top 10 – Settings and Tips

The following table provides the basic rig set up used by the Nationals top 10. These are generally set up on the bank before launching, with mast rake/rig tension being adjusted as required on the water depending on the leg you're sailing, the conditions being sailed and the helms preferences/technique.

Rig Setting	Cliff Milliner (1 st)	Alex Horlock (2 nd)	Alistair Goodwin (3 rd)	Sam Knight (4 th)	Gavin Young (5 th)	Chris Bownes (7 th)	Mike Critchley (8 th)	Tony Critchley (10 th)
1) Mast foot position <i>(Forestay attachment point to front of mast)</i>	1100mm	1120mm	Not stated	Not stated	1100mm	1100mm	1111mm	1115mm
2) Mast rake <i>(Top of mast to top of uppermost rudder fitting)</i>	6000mm, bit less upwind, bit more on a reach	6050mm at 15 on rig tension gauge	Not stated	Not stated	6040mm with rig on very tight, dropping to 6000mm upwind	6070mm	6050mm	6050mm
3) Rig tension/forestay setting <i>(Simply "Loose", "Low Tension" or "High Tension")</i>	Low to Mid tension at 6000mm	on tight in light winds and loose in strong wind	Not stated	Not stated	Low tension upwind, high tension on reaches and loose on run	Loose	Mid Tension	Low Tension
4) Mainsheet horse/bridle length <i>(side deck fitting to bottom of mainsheet block)</i>	Not measured	I can't quite pull mainsheet block to block!	Not stated	Moving traveller system, knots set 6 inches apart around 8 inches from the terminal on the deck	530mm	I have a traveller - 8 inches between the bobbles, 14 inches from the bobble to the side deck	570mm	520mm
5) Lowers tension/length <i>Lowers (Length of lowers from deck fitting to mast fitting when the lower is disconnected from the mast)</i>	Loose, just tight with kicker on at 6m rake upwind	Tight in light winds and off in strong winds	Not stated	Set to be pulled tight as the mast is brought upright	910mm	Adjustable lowers - set to allow a small amount of bend in the bottom of the mast to match the luff curve of the sail.	910mm	910mm

6) Sail used (<i>Dark or light coloured Jackells</i>)	Light	Dark	Dark	Dark	Light	Dark	Dark	Dark
7) Sail Battens installed (<i>Non-Tapered as Supplied, Tapered Contender battens from Matt Biggs or Tapered Dynaflex V1 or V2 from Pete Bingham</i>)	Tapered Contender (Bottom 3 tight to hold shape, to 2 loose to generate twist)	Non-Tapered as Supplied	Non-Tapered as Supplied	Non-Tapered as Supplied	Tapered Dynaflex V1, top 2 loose, bottom 3 tight)	Tapered Contender	Tapered Dynaflex	Tapered Dynaflex

In the following sections we asked the guys for some tips, focus points key settings and thoughts on sailing around the course on the Saturday and Sunday, if you remember the conditions were quite different so it's interesting to see how it changed their thoughts, strategy and focus.

- Saturday - Light winds with reasonable waves
- Sunday - Heavier winds with flatter water

Cliff Milliner

UPWIND

Saturday - Rig set up with lots of power, lots of outhaul off, (like a reach) and upright rig. Was sailing boat flat with very wide angles, maybe 3-5 deg wider than the other top guys to generate speed to punch through the chop, footing not pointing!

Sunday - Very depowered, lots of rake, kicker and cunningham. Again footing for power through chop.

REACH

Saturday - Upright rig, full power.

Sunday - Upright rig, full power. Make sure to stay on the plain. Try to sail down the waves /flat bits.

RUN

Saturday - Keep still, no kicker, trying to keep weight well forward. Not trying to do too much movement. Wasn't enough wind to go by the lee.

Sunday - Loose rig, play the waves, wide angles, by the lee not gybing. Trying to stay in flat spots or downhill on bigger wave patterns.

SUMMARY THOUGHTS

Saturday was about having a powerful rig and footing not pointing to keep your speed upwind. Sunday, everyone well back on the start line, you could get a good transit and use the mid line marker to judge where the line was. Last point... anyone at my strategy briefing... I said go left and all the race winners came from the left both days!!!

Alex Horlock

UPWIND

Saturday - Get off the line and go left hard. There was a big wind bend and this made a huge difference. Keep the boat moving in the waves sacrificing 1-2 degrees of pointing for speed.

Sunday - Tack on the shifts and search for the gusts. Flat boat, hike hard, lots of kicker and cunningham, again get a good start and keep your air clear (easier said than done!)

REACH

Saturday - Keep more kicker on than you expect, outhaul off and centerboard up halfway. Sit forwards. Steer up to get surfing and then down if you are lucky enough to catch a wave.

Sunday - Same setup as Saturday, just keep the boat planning. Come up into the gusts and then sail low with them to get the depth. Cliff has clearly mastered this so watch him like a hawk.

RUN

Saturday - Go a bit higher than you think you should (20 - 30 degrees up from dead run) search for wind, sit right forwards and let the outhaul all the way out. If you can catch a wave then that's great... go as low as you can with it and then come back up when the ride ends.

Sunday - You can and should go deeper now, watch for gusts from behind and try to keep clear wind. Be careful which leeward gate you pick, this will make a big difference so position yourself strategically early.

SUMMARY THOUGHTS

I will repeat the 3 things my dad told me to worry about before my first Cadet race 14 years ago: Good start, clear air and boat speed. There is no magic bullet to winning but if you can get these three right then you're in with a good shout.

Alistair Goodwin

UPWIND

Saturday - Trying to find clear wind quickly and make my way over to the right hand side of the beat. Making sure the sail is deep with a tight leach but not so much that it stalls.

Sunday - Keeping the boat flat by not being afraid to ease sheet to keep the boat upright. Sticking to the right hand side was again the way to go, so coming off the pin end and keeping a lane with good speed.

REACH

Saturday - Staying high to avoid boats sailing over the top and trying to surf waves to lose height and close the gap to the boat ahead.

Sunday - Hiking hard and keeping the weight back to promote free planing.

RUN

Saturday - Keeping weight forward and easing forestay to allow the boom as far out as possible.

Sunday - Sailing big angles to promote planing both by the lee and deep reaching.

SUMMARY THOUGHTS

Having transits for the start will really help to know where you are on the line, vital when racing with such a big fleet to get the first jump on the rest. Making sure that the boat is dead flat on the upwind leg will maximise speed, and it can feel like you are much more upright than you actually are!! Having a race strategy to follow on the first beat rather than just fighting the boats around you, and making gains on the whole fleet.

Sam Knight

UPWIND

Saturday - Keeping the boat moving through the chop. Settings wise the mast was as upright as I could get it, and leach tension was controlled via the mainsheet rather than kicker (I prefer the centre main rather than the floating block for this reason, as the ratchet block on the deck pulls the boom downwards as well as in and out). Once I had the main set as desired I would pull the slack out of the kicker system to stop the boom rising as I let the mainsheet out. Outhaul was set quite loose to keep the foot of the main very deep, around a hand-width from the boom at the deepest point. I was searching for maximum power to drive through the waves, trying not to let the windward tell-tale stall too much and not being afraid to bear right away to quickly re-build speed if a particularly nasty wave caught me out.

Sunday - Keeping the boat balanced. As one of the lighter helms, I spent a lot of the day with plenty of rake and cunningham on! In these conditions, I never sail with the boom hard in when overpowered, so the kicker is key in keeping leach tension. As there was still plenty of short chop around, the beats were a constant trade-off between losing enough power to keep the boat flat while keeping the power to punch through the worst of the sea. I would do a practice beat before each race to get myself set, first getting the kicker hard on, then raking the rig and tweaking the Cunningham until I can sail the boat consistently at 5-20 degrees of heel. With the waves and the shifty breeze it is achieving this consistency of heel that leads to boatspeed, if you can comfortably sail the boat in this window you should be producing the right power for that day. Don't be afraid to be aggressive with your tiller movements, pushing hard up the chop and bearing quickly away down the back of every wave, watch videos of Nick Thompson or Giles Scott on youtube to see how hard you can work a boat in those conditions. On both days I sat about 6 inches further back than I would normally to encourage the nose over the top of the waves, rather than ploughing through.

REACH

Saturday - Rig as upright as possible, with a little more kicker than on the beat to keep the boom down (cunningham and outhaul right off). The top reach tended to be a little broader, so taking every opportunity to bear away and push the boat down the front of a wave.

Sunday - Same as above, don't be afraid to use plenty of kicker to keep the power in the upper third of the sail. As soon as you can hike get backwards on the deck, in the breeziest reaches my head was level with the back of the rudder blade!

RUN

Saturday - Depth, depth, depth and more depth! Rig settings are easy, everything slack bar the rake, which should be off to let the spreaders swing but no more. Get the centreboard up, move in front of the traveller and use every gust and wave to bear away as much as possible without the boom trying to cross sides. I was as far forward as I could reach, pushing the boom out with my free hand to prevent it gybing, occasionally flying by-the-lee when there was enough breeze. This works because there wasn't enough breeze to gain much speed by sailing higher, pushing deep saves distance to the next buoy.

Sunday - With there being enough breeze to work the waves, I could sail to the telltales rather than pushing low. With the extra speed, you could encourage the boat to surf down the bigger chop and plane in the gusts. Use a little kicker to stop the boat rolling, but otherwise settings are similar to Saturday.

SUMMARY THOUGHTS

With the size of the fleet, most of your thinking should centre on your positioning vs the fleet. Plan key points ahead and think about how you can escape if you need to. I always like to approach the windward mark on port, as it negates the need to pick a starboard layline from too far out. Ideally I'd like to do my final tack around 5-10 boat lengths from the mark, but if the starboard lay is looking congested, then I'll cut my losses and tack into a gap earlier and accept I may have to sail a bit further. Also think about the gates, if you think the left (upwind) payed, don't gybe early on the run as you'll have to re-cross in front of the boats around you to get to the left hand gate mark.

Of course the most crucial part of most races is the start. Think about how the conditions might affect this, there is plenty written about line bias and getting transits beforehand to make sure you are on the line but often the conditions play a crucial role. If we look at the two days above, on Saturday the key focus was generating power and speed. Therefore you don't want other boats around you giving you bad air, so start in a position less congested. Looking at my starts on Saturday they were all fairly central with plenty of space to lee-ward to push into. Starting at either end of the line raises the chances of having someone squeezing you from below or rolling over the top of you, when what you really want to do is sail fast!

Conversely, with the breeze up on Sunday I could afford to be a little more aggressive on the startline. In the first two races I was right by the committee boat and for the last two I was the pin-end boat! With everyone fully powered, the speed differences are actually much less, so positioning myself for the shifts was more important than clear air. I could risk being squeezed or rolled because the beats were much bigger and the shifts were larger, meaning there were more opportunities to pull distance back.

Read Nick Craig's 'helming to win' for to learn about the importance of heel consistency and settings vs technique. Watch some of the racing from the Olympic classes to learn from the best! The recent 49er worlds at Weymouth had some really insightful commentary, especially around sailing in fleets of 60+ boats so I would highly recommend you find it.

Gavin Young

UPWIND

Saturday – Sail free and fast, forget pointing, more outhaul than usual, less kicker and definitely no pinching, keep the boat moving with power to get through the waves. It's not flat water sailing so foot off and go for speed and power rather than height to windward. Keep in clear air, that way you also have the option to tack when you want. Weight further back in the boat than lake sailing to allow the bow to climb over the waves rather than burying it in.

Sunday – Similar to Saturday, outhaul out more than lake sailing, also kicker a little softer, concentrate on keeping the boat flat and steering through the waves, if your speed drops off, foot of gain some speed and then start pointing, but still focused on speed not pointing with weight further back to keep bow up, arse probably 4-6 inches back from bridle and hiking straight out.

REACH

Saturday – Used waves to push down low, headed up between waves/gusts to keep speed up, prepared to head up as required to avoid boats sailing over the top. Steer carefully through the waves, try to surf but also avoid big uphill bits.

Sunday – Hike hard to keep boat flat, bear away if you have too in the gust let the boat go for it don't worry about pointing lower than the mark in a big gust, once the boat speed has increased you can then bring the boat up on a higher course to point at the mark, although not until you have gone as far downwind in the gust as you can to stay in the pressure for as long as possible. Weight right back in the boat, the Supernova sits fairly flat in the water when planning so you can get your weight right back without digging the transom in, then she really goes. Outhaul right out, kicker on to prevent too much twist, rig tension on tight to power up. Hiking hard and keeping the weight back to promote free planing.

RUN

Saturday – Kept weight forward, centreboard at least half up, when enough wind to hold the boom out I eased forestay to allow the boom as far out as possible, used a little kicker tension to stop the leach flapping around in the lighter airs, eased the kicker when the wind increased slightly.

Sunday – Sailed with everything loose, a little kicker tension to control the leach, let the boom right out against the shrouds and pushed as low as possible in the breeze, push low in the waves then headed up a little to increase boat speed for next wave, catch wave and bear away on it to push low, concentrate on trying to keep the boat planning as much as possible.

SUMMARY THOUGHTS

Really concentrated on getting right up on the start line, mid line to port pin, aimed to dig a whole out some line space to allow acceleration before the gun, seemed to be quite a line sag in the middle despite having the mid line marker. Used mid line marker to provide a good transit. Clear air and a front row seat is essential. Having a fall back plan to get clear air is also important. Left seemed to pay, big lift coming into windward mark on port, you had to be really careful not to give away ground by over standing the layline, due to the port take lift the layline was earlier than you would have first expected.

Make sure you know where the marks are, bearing away from the windward looking for the wing mark is not fast, make sure you have your prescription sun glasses on so you can see the Bl&%dy thing.

Keep your head out the boat, if you miss a shift you need to tack, accept you have lost ground as you won't get it back by keep going the wrong way, the earlier you accept the loss and tack the less you will lose.

Chris Bownes

UPWIND

Saturday - Control the leach tension with the mainsheet rather than the kicker, focus on steering the boat up and down the waves to maintain boat speed.

Sunday - A lot more kicker than the Saturday, lots of rudder action with a focus on not burying the bow in the bottom of a wave. Continual movement of the rig between 6070 and 5070 to be as powered up as possible at all times with a flat boat. The tactick was key to upwind performance as there were 45 degree lifts to be found by following the numbers.

REACH

Saturday - Flat boat - bear off in the gust, harden up in the lulls

Sunday - As above

RUN

Saturday - Work the waves as best you can - build speed climbing a wave and bear off down the back

Sunday - As above

SUMMARY THOUGHTS

I am 6ft 4 and 97kg.

Mike Critchley

UPWIND

Saturday - Full sail, medium kicker, reading and tacking on wind shifts essential. Clear wind at the start absolute must!

Sunday - Flatter sail, kicker on hard, must keep the boat flat and do not over point, if anything, ease off for speed. Board up slightly if overpowered. Rig raked back to 6020 mm.

REACH

Saturday - Outhaul eased off, kicker light tension, maintain clear wind, weight positioned central in the boat. Board up 1/3.

Sunday - Medium kicker, weight aft, maintain clear wind. Board up 1/3.

RUN

Saturday - Outhaul eased, kicker light, board up 1/3 to 1/2, try to sail the most direct path to the mark, maintain clear wind, weight central.

Sunday - Outhaul eased, medium kicker, sail direct path to the mark, maintain clear wind, weight slightly aft.

SUMMARY THOUGHTS

Plenty of room and clear wind at the start is essential. If you get buried at the start, don't be afraid to tack off onto port and duck every boat to get clear wind. Sometimes this can pay off big time compared to sailing on and staying in dirty wind. Read the shifts up the beat and tack on them. Look at other boats ahead to anticipate wind shifts. What works well on the first beat can often pay on the subsequent beat, but not always true. Keep your 'head out of the boat' looking for opportunities to gain extra places on all points of the course. Capitalise on other people's mistakes.

Tony Critchley

UPWIND

Saturday - Upright mast with low tension. Not too close hauled to increase speed through waves. Tried to avoid 'stopper' waves.

Sunday - More mast rake, less tension. Still bore away slightly to increase speed as long as I could last!!

REACH

Saturday - Less kicker, rig tension as upwind, outhaul off, tried to surf the waves.

Sunday - As above but rig tension on to bring mast more upright.

RUN

Saturday - Rig tension off to allow boom forward. Let off outhaul. Kicker about the same. Just tried to find the best wind. Generally gybed up the middle to sail the shortest route.

Sunday - Similar to above but occasionally hardened up to surf the bigger waves.

SUMMARY THOUGHTS

Basically get your head out of the boat, don't stuff it upwind and always seek clear air. It will pay dividends on such long legs.

BONUS TRACK

Cliff's Additional Post Nationals Observations:

Nationals 2019 Paington/Torbay

If you went to my tactics/strategy meeting I said if you want to win a race start at the pin and go left..... every race winner came from the left but not that many people where there?

Pre event training. Lots of leg raises, sit up, squats, leg curls, arm rows, running, cycling and rowing. Not as much sailing, so went for quality rather than quantity, eg the bigger opens, or windward leeward training.

Day 2 5-7 knots easterly, bit of swell and rougher sea state left over. Wind forecast to go hard right at some point around mid-afternoon.

Race guide says go left for more pressure and pre-race sail that looks to be true. Slight wind bend on the left as well from the headland. Need a powerful rig, lots of outhaul off, foot off lots for speed, Just like Aberdovey a few years ago.

Race 1. Not quite sure where to start so went for the closer to port end, as I saw Alistair and Sam going that way. Nice start, tacked relatively soon and had great boat speed. Not much kicker, lots of outhaul off, power in the rig, footing off for speed through the chop. Had more speed than Sam/Alistair which was nice and made life simple. Worked the top left of the beat, to round in the lead, with loose cover on Sam. Close at the bottom mark, needed to stay stiller and not try too hard. 2nd beat went further left again, had more speed than the other by footing more, than pointing.

Race 2. Same as the first, but started closer to the pin looking for more pressure and the small left shift. Went further left before tacking. Almost one tacked the beat. Great upwind speed by footing loads gave me a big lead.

Race 3 A lot more people at the pin end. Hit someone, but general recall, so got away with it. Felt the wind dropping and shifting right. Think this may be the big right shift on the forecast. So start mid line, tack early. Sam and Ray going same way. Muppet moment, hit someone while ducking, do turns. Have to go right now as I'm in the pack. It doesn't pay a lot less wind on the right and the wind didn't shift either. Alex wins from the left again. Sam and I both thought the wind would shift right but we were wrong...Doh

Race 4 Can't afford another discard, so back to plan A of going left upwind, so concentrate on winning the pin end. Can't understand why not many people on at the pin end, as all the race winners have come from there. So win it easily and win the race comfortable from the left again!

Everyone seemed to be pointing to high, I was going 5deg lower but much faster.

Day 3.

Off shore so shifty, and left normally pays at some point as the shifts are bigger. Need to hike hard, lots of Cunningham to depower the top, still more outhaul off than normal to get through the chop.

Race 5 Pin end start, but not great, looking mid pack. Concentrate on playing the shift nicely to the left to work into front pack. I get to the layline mid beat, maybe a bit early, due to my poor start. Big left shift on the lay line, means I can foot of to the mark, to round in top group. Front guys haven't spotted the gate so go to low. Alex and I can roll them to round in top 3.

Work the left hand side of the beat again, trying to stay the left most boat to get advantage of any shifts, just cross Alister at the top of the beat and hold him off downwind using the waves, by the lee to take the win.

Race 6

Big sag in the line. Use the transit to see how far behind the mid line marker is, at least 2 boat length. Mid line start, everyone hanging back still behind the mid line marker, so using the marker as a guide, went for it, about 2 boat lengths in front of everyone else. Big left shift, tack early to take it, then head back left when I can.

Not as fast as the others now they are fully hiking. I seem very quick on the reaches, keeping on the plain and pointing down the waves. Winner came from the left again! 3rd

Race 7. Same start again, big sag, punched out nicely, tried to get left early looking for the shifts. On second beat, had to take the left gate due to congestion. Started to get lifted on port, so stuck with it, waiting for header to get back left, it never came, kept lifting right to the lay line. It went about 50deg. The GPS track showed me sailing a massive ark, but on the outside of the bend. Not a good idea, should of gone more left early. Race winner was on the left.

Great last run and reach sailing under Alex, clawed it back to 3rd on the line.

Race 8 all the top guys at the pin end this time, again punched out as most well below the line. Very close around the course but don't quite have the hiking power of the bigger chaps, work hard hang in! It's the last race.

Spotted the RO moving the Finnish to top of beat, remembered he always does this on the last race! So tacked a bit earlier than some of the other on the left, and just piped them, Sam tacked even earlier and got me by a boat length. 4th

Good times.