

# Sail Trim — One■Page Cheat Sheet

Keep it simple: Angle of Attack • Depth • Twist

## The 3 Levers

- **Angle of Attack (AoA):** How aligned the sail is to apparent wind. Trim/steer so luff telltales stream with only brief windward flicks.
- **Depth (Camber):** How full/flat the sail is. Outhaul + cunningham/halyard + mast bend control draft & entry/exit.
- **Twist:** Leech openness from bottom to top. Mainsheet/vang and jib sheet/lead balance power & control.

## Quick Trim Routine (Upwind)

- 1 Traveler & sheets: set AoA so inside telltales stream (occasional windward flick).
- 2 Depth: add power for chop (ease outhaul/cunningham); flatten for height (tighten + bend).
- 3 Twist: top leech telltale mostly flowing. Add twist in light & heavy; least twist in moderate.
- 4 Jib lead: forward = more upper leech tension/power; aft = flatter foot/more twist.
- 5 Re■check helm & heel: aim for slight weather helm and a comfortable heel angle.

## By Condition

- **Light air:** Fuller sails, extra twist; traveler up; steer for flow, avoid stalls.
- **Moderate:** Trim harder; minimize twist for pointing; keep slight weather helm.
- **Breeze/chop:** Flatten with outhaul/cunningham/mast bend, add twist; traveler down; feather in puffs; consider reef/furl.

## Two Quick Checks

- **Main:** top leech telltale streaming most of the time (brief stalls OK in moderate air).
- **Jib:** inside lower telltales stream; change course/trim so they don't stall for long.

Sources & further reading: North Sails — “Cruising Sail Trim: Putting it all together”, “Understanding Twist”, “Steering Upwind”.

# Starting

## Perfect Start

“The perfect start is bow-forward, at full speed, hitting the line as the gun goes in clear air, in the best part of the line, with the freedom to do what you want next.”

It's not always the most *aggressive-looking* start — sometimes it's a disciplined, conservative start in a clear lane, if that's what maximizes your race strategy.

## Observations going to the start ( start preparation starts as you leave the dock)

- How windy is it
- What sails do we need up
- Where is the start line set – will there be a geographical affect/ land affect
- Is the wind shifting on the way out or is it steady
- Where is the wind on the course
- Are there any notable clouds.
- Has the course been laid / gates been laid – what does this look like – square / skewed

## Be on the Course 1 hour before the start

- Sail the first beat – get tacking angle number / downwind angle numbers
- Decide on upwind strategy / side of the course.
- Is the course skewed/ will you be sailing on one tack longer than another
- Is there a favoured gate for the downwind / remember this for the downwind.

## Practise time on distance to the line

- Need to practice this to adopt and get a feel for the particular conditions.
- Do a few practice runs to the line. Put the timer on 3 minutes and then act as you are starting. Do these 3 or 4 times.

## Establish the biasness of the line

- Head to wind next to the pin look through the centreline up the line to the boat
- Compass angle of the line – if greater than 90 degrees pin is favoured.
- Will get a feel through your tacks if you are going more along the line on one tack or not.
- Work out the lay lines to the Start boat / Pin depending on where you want to start.

## **Most fleets have a fleet pattern – Get in it and stay out of trouble.**

- **Counter Clockwise loop** – Sail 5 – 10 boat lengths below the line – gybe when you get to the pin and head back around
- Then put your **own pattern** into the fleet pattern – depending on where you want to start
- Go down the line and then always gybe and know your **distance from the line**. Always gybe to maintain a distance from the line – unless something obscure happens
- Know **how long** it takes you to sail along the length of the line
- Keep your **eyes open** and don't assume anything – distractions & collision can spoil your day – stay away from hectic moments.
- Your pattern that you stick to **provides consistency** in your approach and will allow for consistently good starts.
- **Mick Malthouse** quote for Collingwood.
- **Don't change from this flow unless you have to. If forced to tack find your way back into the flow.**
- On Port you will always know how far you are from the line ( get a **crew member to call this** ) don't just randomly sail from the line
- Never sail off from the start as sometimes you miss it – does happen.

## **Manage Distance from the line**

- ( In every boat it is different, in every wave state it is different, in every wind strength it is different)
- Work out where you want to start on the line what distance you will need to be back from it when you do your approach tack. - and then do your circles in that area you want to start.
- Want to tack onto starboard before the start. ( I like to be on my approach earliest 1.30 seconds no later than 1 minute)
- Time you tack often depends on fleet size – Worlds fleet often 1.30 to get a position.

## **Know where you want to be on the line.**

- This will dictate your tack not other boats. Don't need to go up to other boats as they may not have it correct.
- Ideally want a clean gap away from congestion and the clumps of other boats

When coming in on port to do your approach tack -go clause hauled on Port before you tack – easier on everyone – the crew – allow you to comfortably lock in a position.

**Knowing time on distance to the line is the trick**

**Game face on with 4 minutes to go** – hyper focussed but clinically calm – deep breaths meditation

**Always be moving** ( boxer, footballer) – don't sit up on the line with your sails out waiting – you will be a sitting duck.

**I like to follow a competitor in and be behind and slightly below him.**

- Allows me to tack if I want to go with him and hook him and push through him.
- Also allows me to keep going if I need to behind the other boats.
- Risk is you may be late to the start so need to know the time and your time on distance

### **3 Boat race**

- Beat windward and leeward boat.
- Don't let the leeward boat get bow forward
- Hold the windward boat up to create a hole below to accelerate into.
- Never get too greedy with you hole as someone will see it and try and steal it. Know how to defend it from hookers from behind or port tackers.
- If they come in luff head to wind.
- You need to go with the fleet across the line.

### **High Risk areas**

Never come in from above the lay line of the committee boat – generally where the less skilled sailors are and congestion.

High risk is at the ends – Boat and Pin

Will need to know when to bail out.

Aim is to hit the line at the gun with full speed – clean wind – in a position where we can clear out and have freedom to tack on the first shift

Bail out - Know when you are about to have a bad start. You get that gut feeling. Best time to cut your losses is immediately.

Tack/ gybe/ sail backwards reposition – utilise the last 20 – 30 seconds to do this.

Don't resign yourself to a bad start where you over and you are using race time to get back to the line.

You are in a position where you cannot make the line etc.

Best time to act is immediately if in a bad position.