

Waldringfield
Sailing Club



Start Racing Training



Theory Session



Introductions

- Name?
- Boat you sail or have sailed or intend to sail?
- Racing experience?
- What do you want to get out of the training?



Start Racing Theory Session Agenda

- 5 Essentials
- Starting (Preparation, Flags and Sequence)
- Boat Handling
- Boat Speed
- Strategy / Tactics
- Basic sailing rules



5 Essentials?

- Trim
- Sail Trim
- Centreboard
- Course Sailed
- Balance





Starting – Preparation

- Get to start area 10-15 mins before start
- Confirm course
- Check line bias
- Sail part way up beat to assess wind
- Ensure sails are set correctly for the conditions
- Practice your start (time and distance)



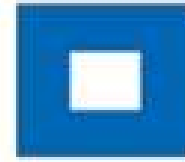
Starting – Flags and Sequence

- -3 Mins to Start



Class Flag

+



P Flag

+



- -1 Min to Start



Class Flag

+



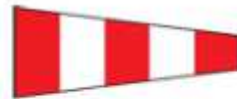
- Start



Individual
Recall
'X'



General
Recall



Postponement



Preparatory
'P'



Black Flag



1 Minute
rule



Boat Handling

How do you steer your boat when racing?

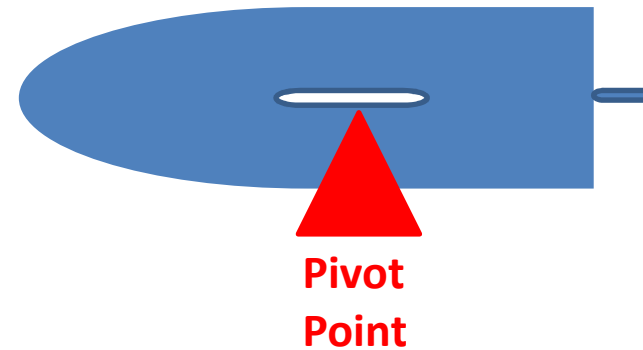
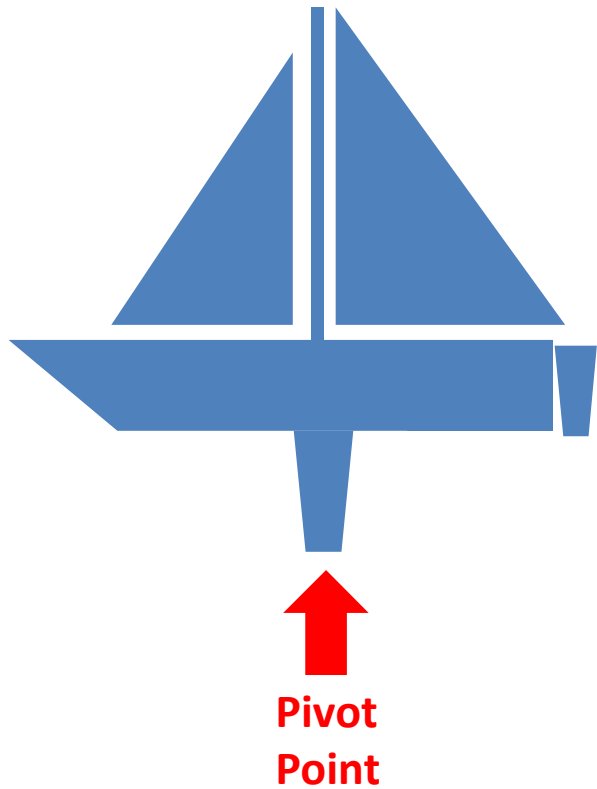
1. Sails
2. Hull
3. Rudder



Note – Sailing is about **balance**



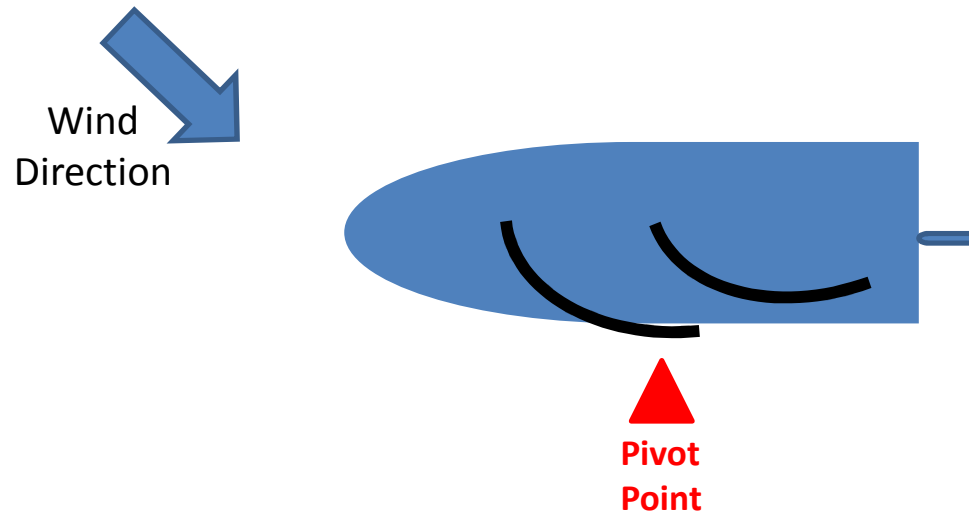
Boat Handling



A dinghy will pivot about its centre board, if you imagine this while sailing it helps you to understand how to manoeuvre and control the boat using the sails, hull and tiller.



Boat Handling Cont'd



Scenario 1 – If we pull the jib on and leave the main flapping what is the boat going to do?

Answer = Will turn bow of boat to port

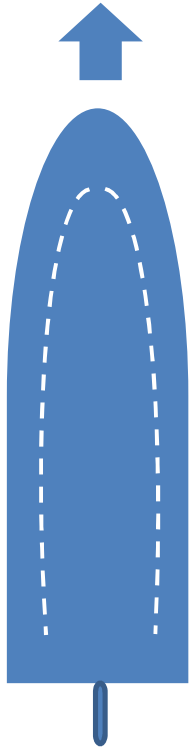
Scenario 2 – If we pull the main sail on & leave the jib flapping what happens?

Answer = Will turn bow of boat to starboard.

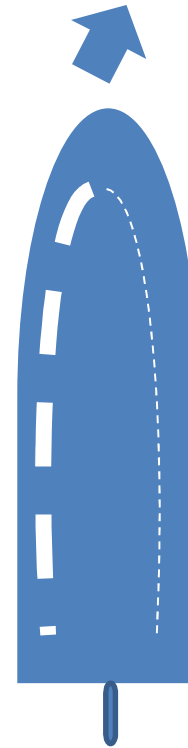
Note – You don't have to fully let off the sails to get the turning effect. A slight ease will change the boat balance and cause the boat to turn.



Boat Handling – Hull Trim



When the boat is flat, the waterline is nice and even around the hull and therefore allows the helm to steer a straight course without the use of the rudder.



When the boat is heeled to starboard, the waterline changes and shifts over more the starboard side of the boat increasing the wetted area on this side. The effect is the boat will naturally turn to port. Heeling the boat to port will have the opposite effect and will turn the boat to starboard.

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Boat Handling – Hull Trim



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Boat Handling – Hull Trim





Boat Handling – Hull Trim



Light wind – sit forward, reduces wetted area and drag



Medium wind – sit central,
maximises water line length and
balance boat

Strong wind – sit towards stern, lifts
bow and promotes boat to plane





Boat Handling – Hull Trim



Not the ways we
recommend you
trim your hull!





Boat Handling – Rudder



*The tiller is up too much and the rudder drag is high.
Too much weather helm.*

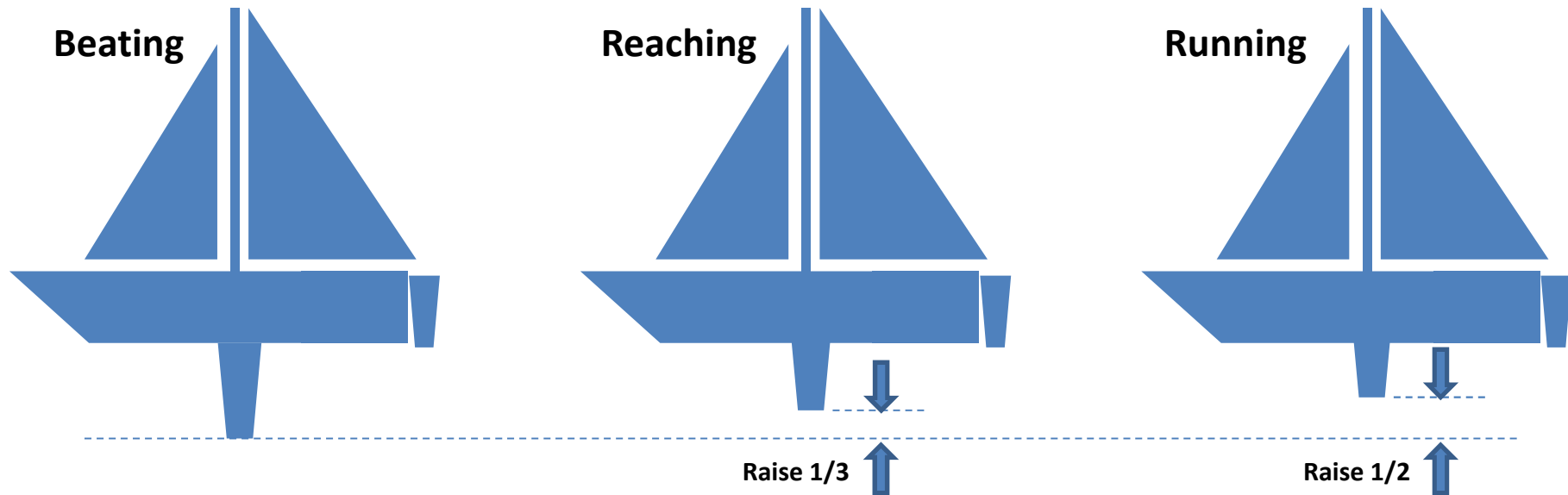


*The tiller is just up a bit from centreline and the boat is
balanced.*

Note - Excessive use of the rudder acts as a brake and slows boat speed. When the boat is well balanced you will have a nice even wake from the back of the boat.



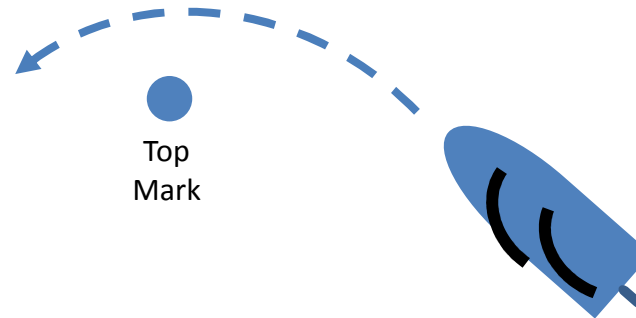
Boat Handling – Centreboard



Note – As the boat speed increases less centreboard is required to achieve the same grip and reduces drag. When running there are less lateral (sideways) forces on the boat, so the centreboard can be raised to reduce drag.



Exercise – Boat Handling



Question– How do you help the boat steer around the mark using your sails, hull and rudder?

Answer = Heel boat to starboard when rounding the mark to turn bow to port.



Boat Speed

- The sails on the boat are what generates our power. To create boat speed we need to effectively trim the sails to maximise the wind available.
- For this section we are assuming your rig tension and jig cars are set correctly for the wind conditions.



Boat Speed – Tell Tales

Tell tales are indicators on the sail that help us correctly trim the sails to the wind conditions. When the tell tale is not flying correctly, move the sail towards the tell tale that indicates the problem.

Headsail Luff Telltales



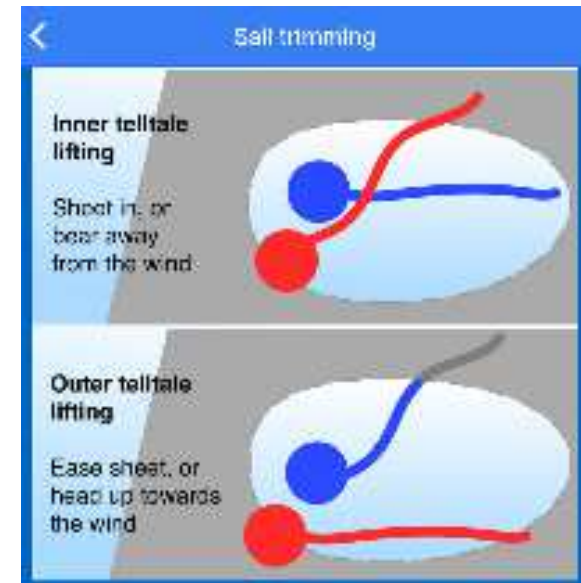
Leeward Fluttering...
Ease Sheet



Headsail Trimmed

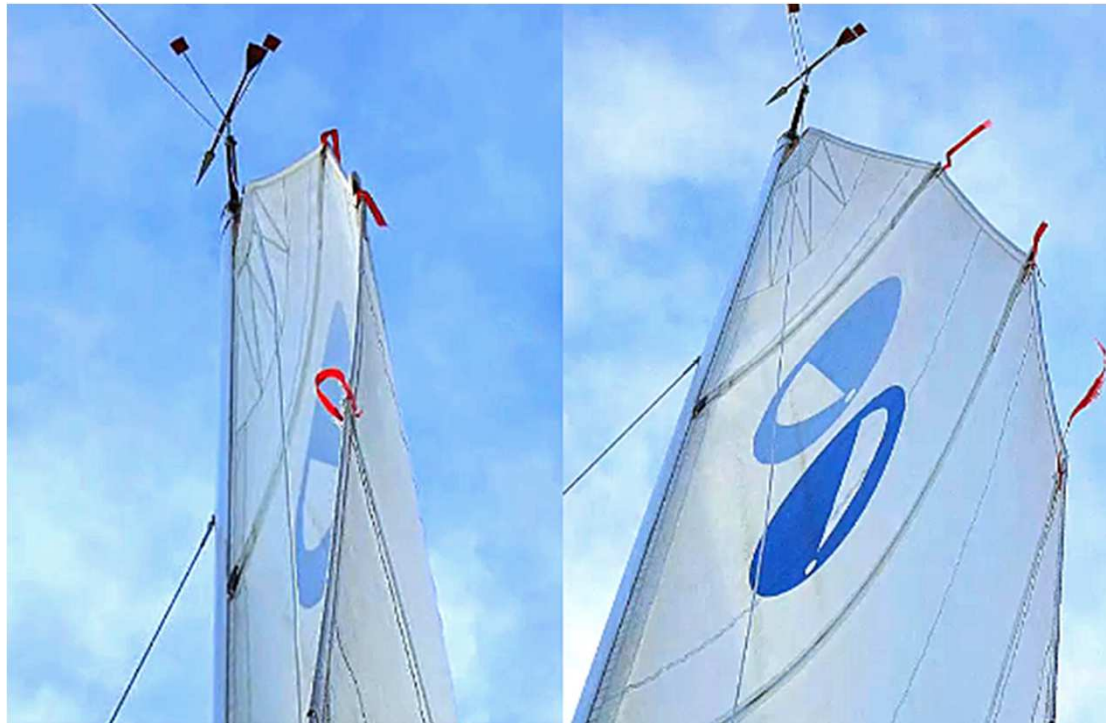


Windward Fluttering...
Sheet In





Boat Speed – Tell Tales



Main over sheeted
stalling tell tales and
causing them to bend
towards the leeward
side of the sail.

Main correctly
sheeted tell tales
all streaming.



Boat Speed – Sail trim

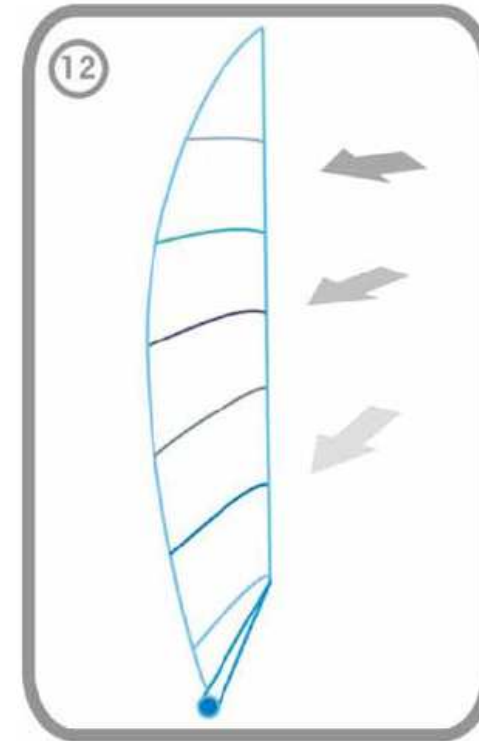
Laser

How the Control Lines Work:

Cunningham
1. Fattens top part of sail
2. Moves draft forward

Vang
1. Pulls boom down
2. Bends mast to make distance between leech and luff longer and flattening sail

Outhaul
1. Ease draft is bigger
2. Trim draft is smaller



Sail Twist

Due to friction over the water, windspeed is less at the base of the sail than at the head. Consequently the head has to accept increased wind. The result is that the apparent wind at the head is further aft than the wind at the base. The need for sail twist is therefore evident.



Boat Speed – Sail trim



Note - Most important aspect of sail trim, if in doubt ease the sail out!



Strategy / Tactics

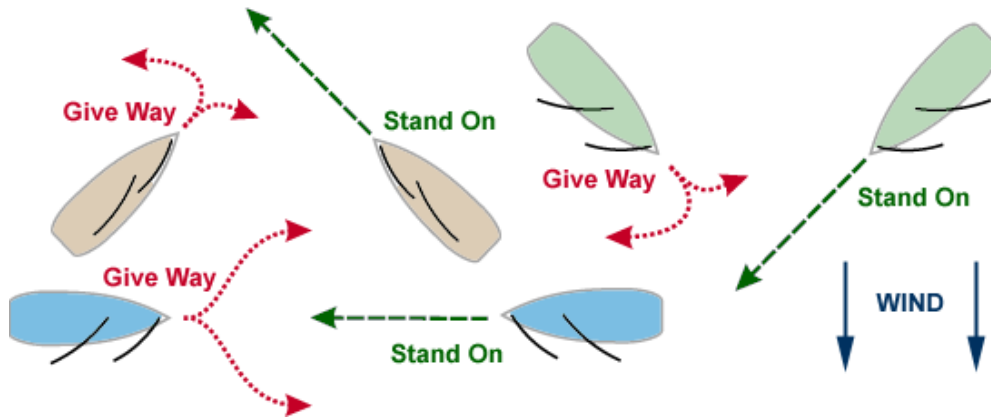
What are the main considerations when working out your strategy / tactics ?

- Good start, on the line with boat speed and a clear lane
- Navigation of course
- Wind direction, shifts and pressure
- Tide and effects along the river (e.g. fast / slack water, eddies etc)
- Obstructions (moored boats, river bank, buoys etc)
- Avoid difficult situations
- Minimise errors



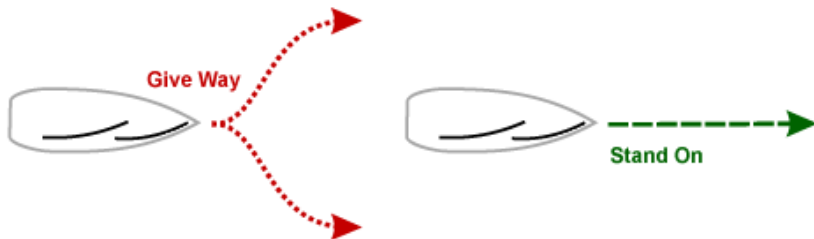
Basic Sailing Rules

Port Vs Starboard

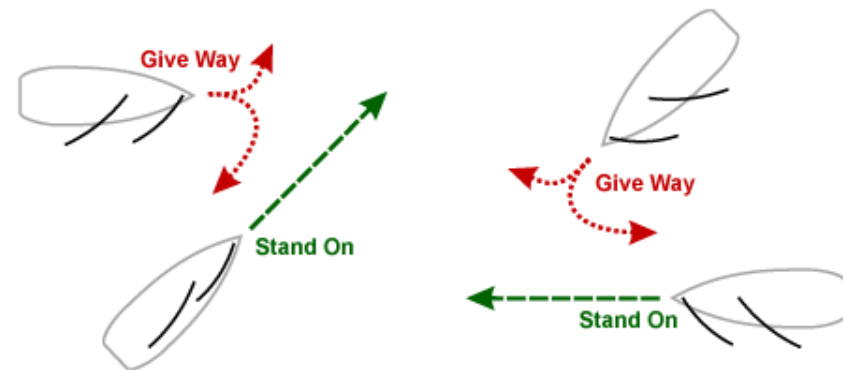


- When tacking you must keep clear of other boats
- Room at windward mark to inside overlapped boats on same tack within three boat lengths
- Room at leeward mark for inside overlapped boats
- What if I break a rule – do your penalty turn(s)

Overtaking Vessels



Windward Vs Leeward



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Questions ?

