

The Minnow Handbook



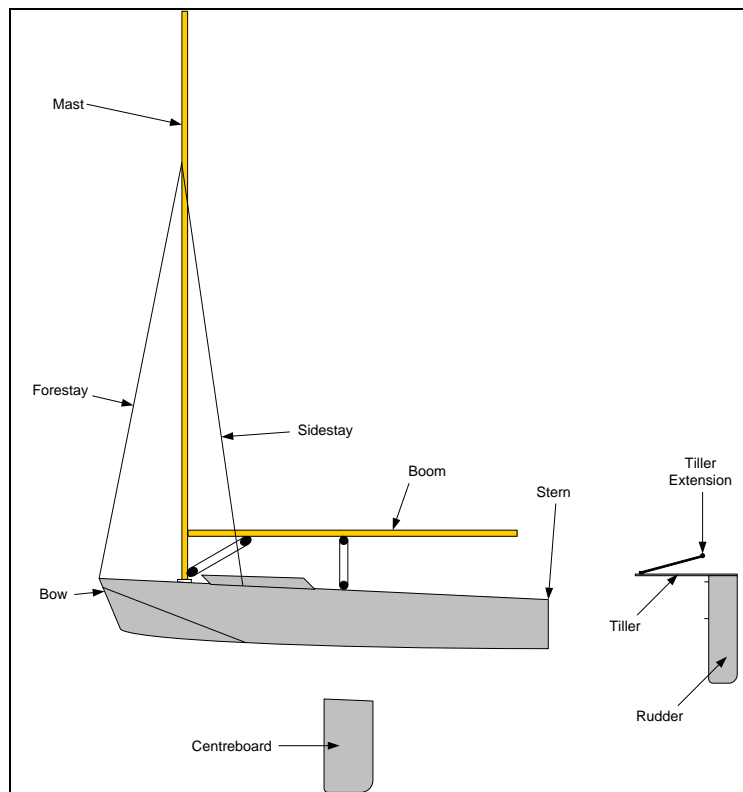
1. Minnow Basics

Welcome to Minnow sailing.

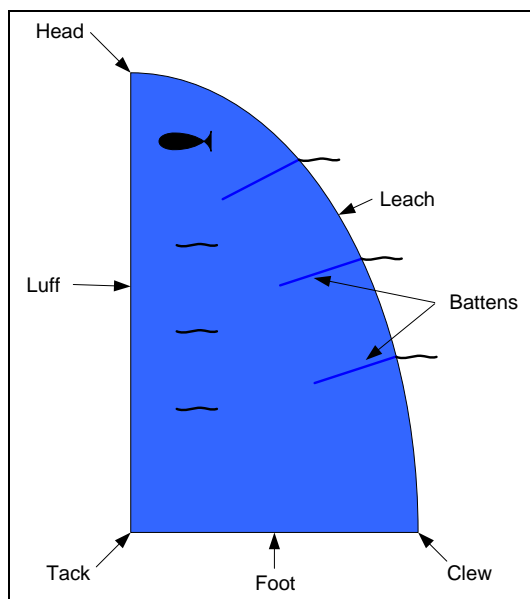
Whether you are new to sailing or started in another class before sailing a Minnow, this book will be a great help to you improving your sailing. You might know these already so you can use this to teach Mum and Dad

Before we get into racing we'll go over a few basics about the Boat and Sails.

First the Boat

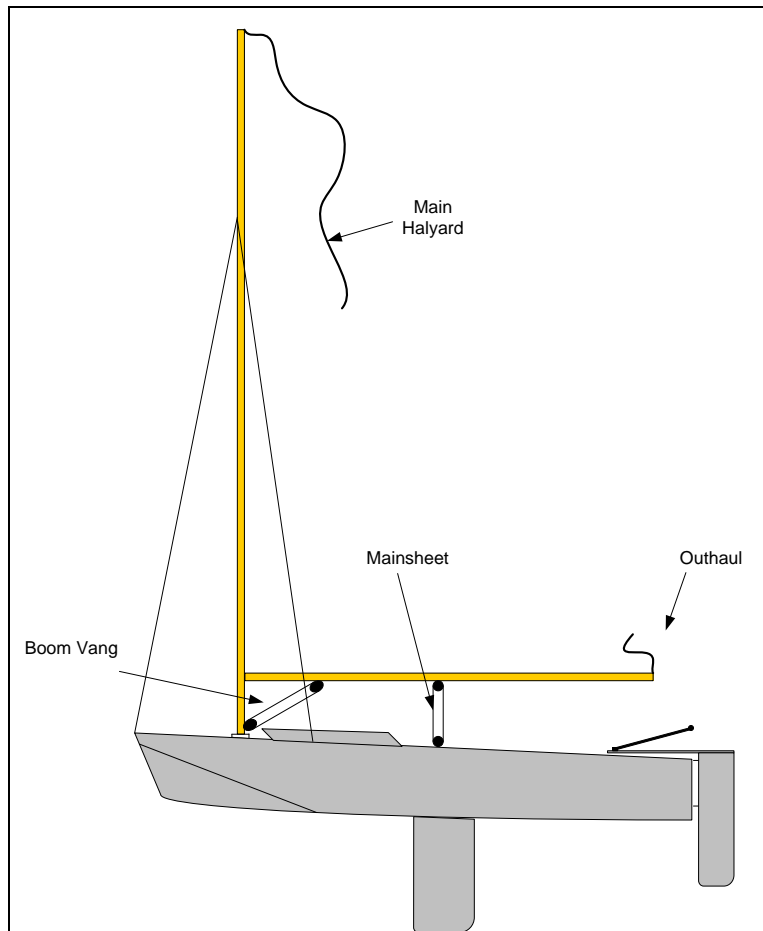


Now the Sail



There are also a couple of important ropes to remember

1. Main Halyard - This is the rope that pulls the sail up to the top of the mast.
2. Outhaul - This rope attaches the clew to the end of the boom.
3. Mainsheet - This rope joins the boom to the boat and is used to adjust the sail when we are sailing.
4. Boom Vang or Vang – This is used to change the shape of the sail to suit the wind.



We will talk about all of these ropes later.

2. Sailing Faster

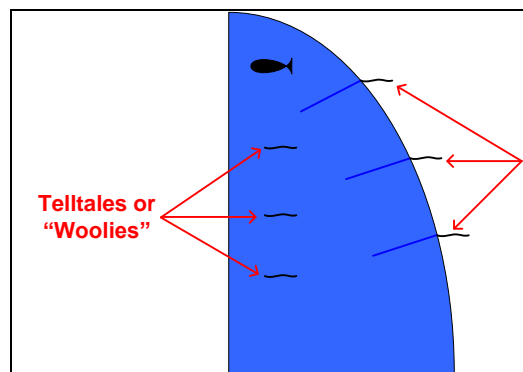
Have you noticed how some skippers go round a course much faster than others?

It isn't a fluke that the same ones do it every time. It isn't a special magic. They can usually explain why what they did was faster. You can sail faster too, if you sail for fun and practice a bit, especially with another boat. Don't just race. Practise just one or two things at a time. Don't expect to be a World Champion by next Tuesday. And never give up.

3. Preparation

You should have no onshore hassles because they unrest you and stop you thinking clearly. Here are some simple things to help you sail better.

1. Have all your gear organised and keep together. Make a checklist. Pack your gear the night before sailing so you aren't rushing around in the morning.
2. Leave difficult adults, children & dogs at home if possible. You cannot race well if people upset you before the race. Difficult people should be sent out for one hour in a Minnow in a 20 knot wind, they will return with a proper respect for your skill.
3. The hull, centreboard & rudder should be in good condition with no bumps or scratches and should be smooth (shiny).
4. Halyard, outhaul and vang should have marks so you can repeat fast sail settings.
5. Make sure you have all your safety gear like a bailer, and make sure your rudder and centreboard are tied to your boat.
6. Make sure you have the proper sailing gear. It's very important to stay warm.
7. Make sure you have a proper lifejacket.
8. Make sure you are wearing a hat and have sunscreen on.
9. The sail should be fitted with 2 sets of ribbons. A set one-third the way back and another on the leech.



4. The Shape of the Sail.

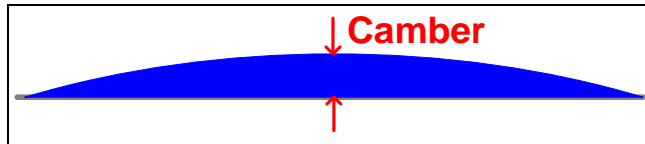
There are three stages to learning about the shape of your sails

1. What shape is the sail? - Big mystery stage
2. What shape should it be for today? – Set up and sail it stage
3. What shape should it be for the next few moments? – Expert stage

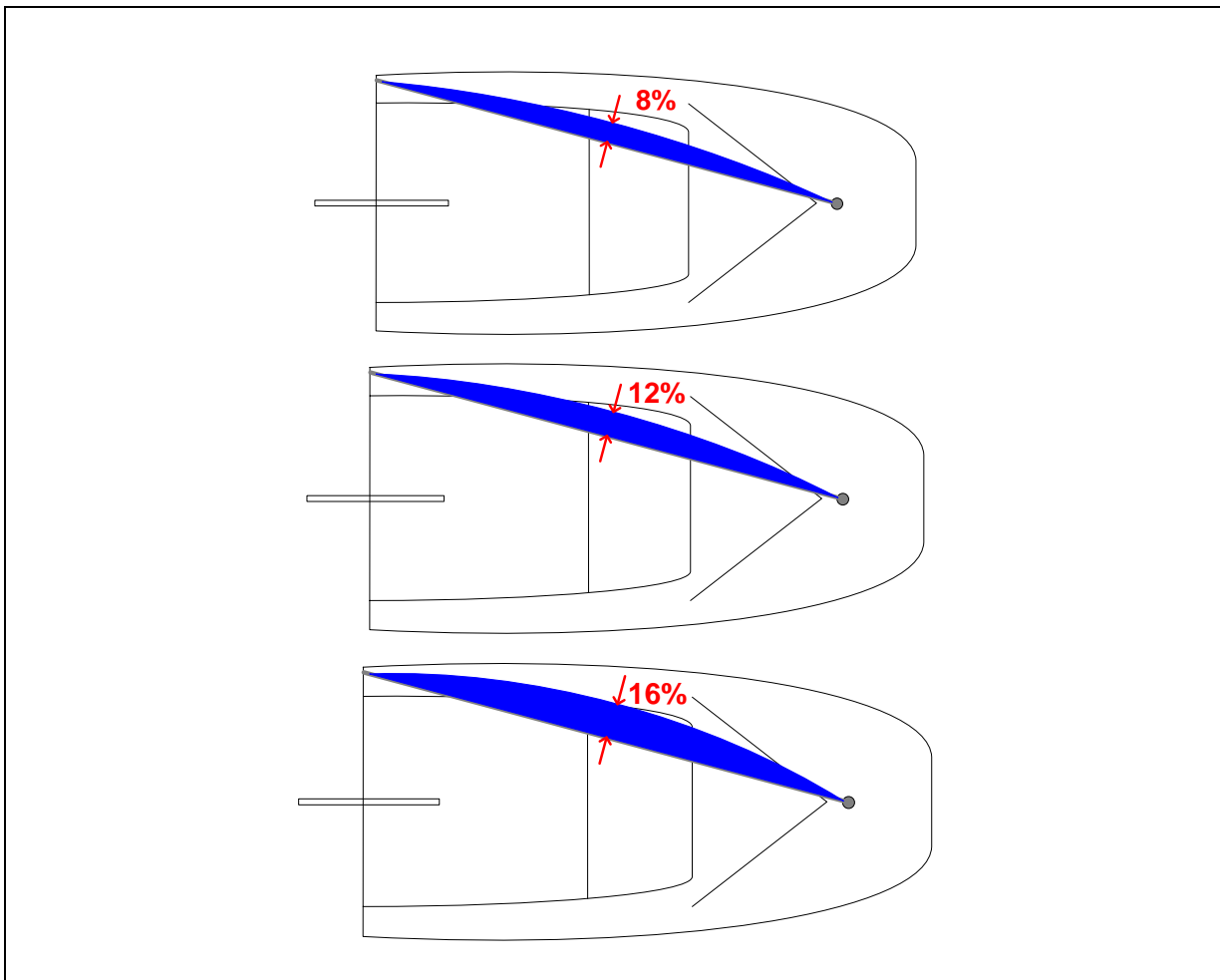
Many people wander forever in the big mystery stage but if you learn this next bit and listen to your coaches then you can be in the expert stage.

Depth of Sail (Camber)

Camber is the depth of the sail, or how much curve you have in your sail. The position of camber is controlled by halyard and outhaul tension.



A deep camber sails give more power but doesn't point as high.
A shallow camber doesn't provide as much power but can help you to point higher
You must learn to recognize cambers of 8%, 12% and 16%.

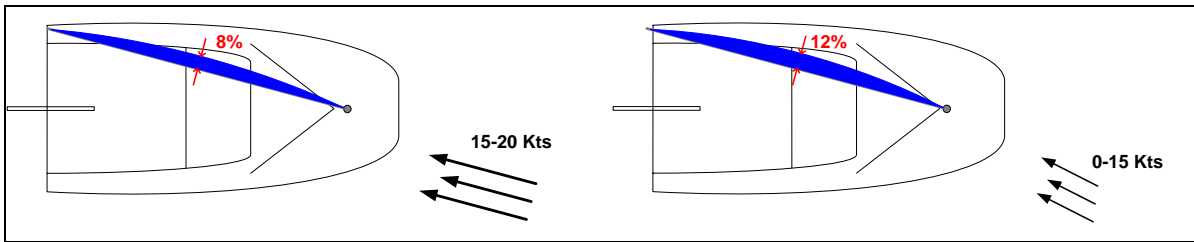


If you are a light skipper then a smaller camber is required. You check your camber before going out to race

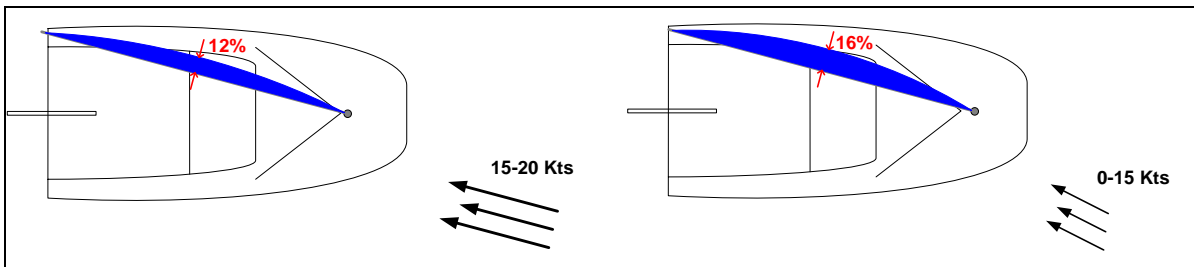
1. Light skippers should flatten the sail until they can handle the power.
2. Heavy wind speed means a smaller camber.
3. Lumpy water needs a bigger camber to help you power through the waves.

Basic rules: Wrinkles up the luff are fast in LIGHT wind. In HEAVY wind use a tight halyard.

Smooth Water



Lumpy Bumpy Water



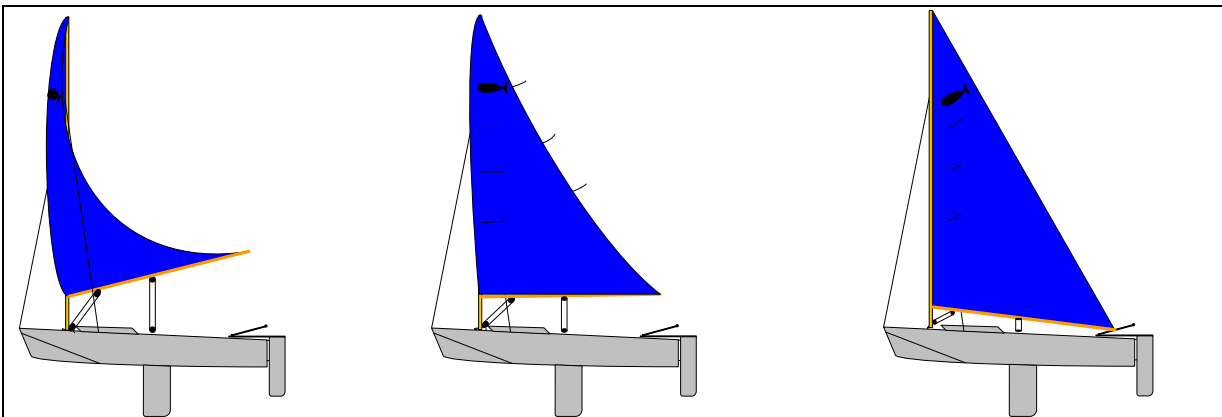
Twist:

The twist of the sail controls the air flow OFF the sail.

Twist is controlled by the vang and mainsheet when sailing upwind.

In a Minnow, the VANG controls the LEECH on a REACH.

The basic rule on twist is the top batten should be parallel with your boom.



Too much twist.

Just right.

Not enough twist.

Wind

The wind does not stay the same in speed or direction - there are 4 types of wind change that are important:

1. Gusts & Lulls (Change in speed)

- Affects – steering and sail trim
- There is usually a gust each minute in a normal sea breeze
- The gust produces about 60% more power from the sail

- In gusts, steer up to keep control and gain height and ease your main to keep the boat flat.

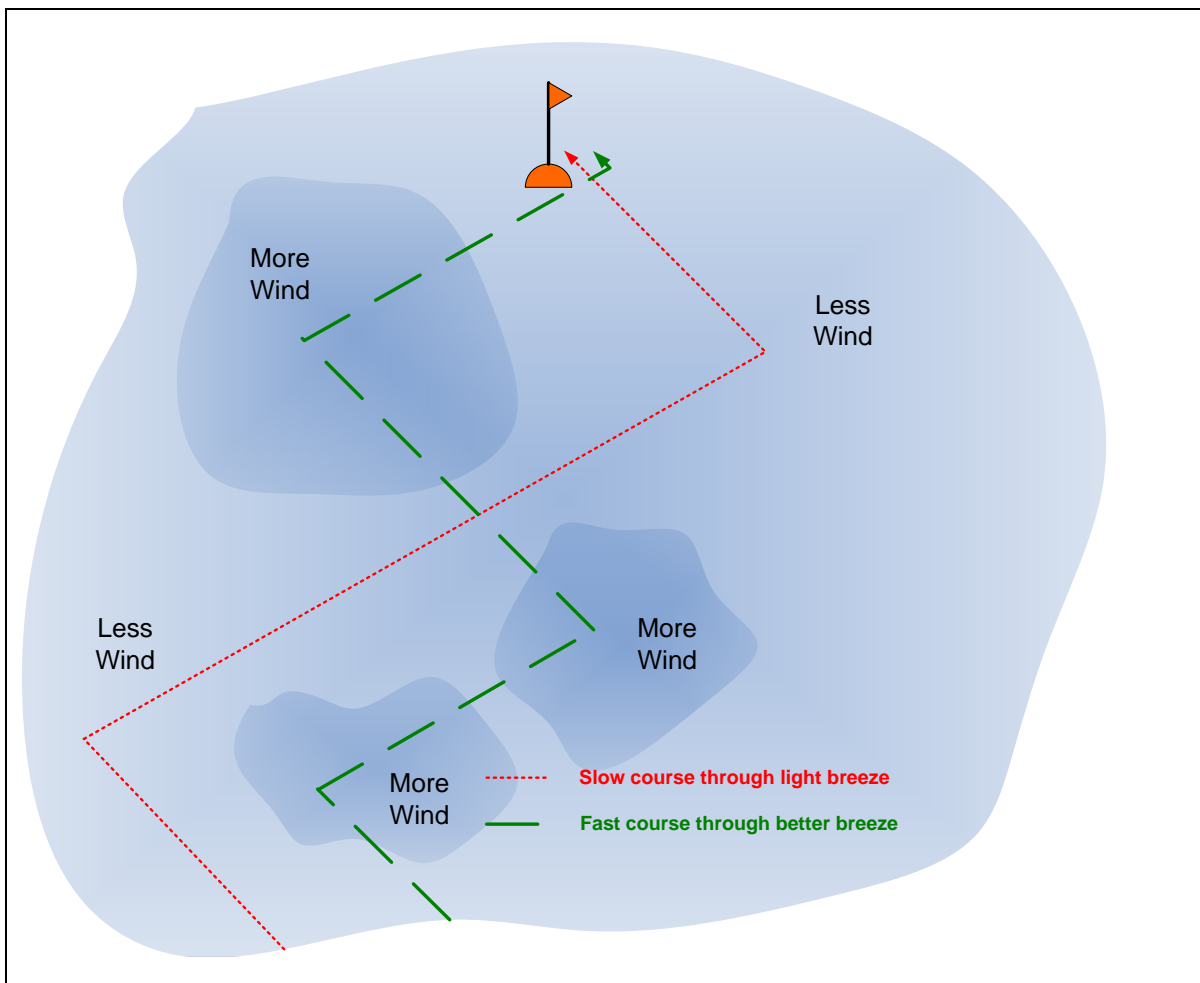
Basic rule:

Luff in a Puff – UPWIND

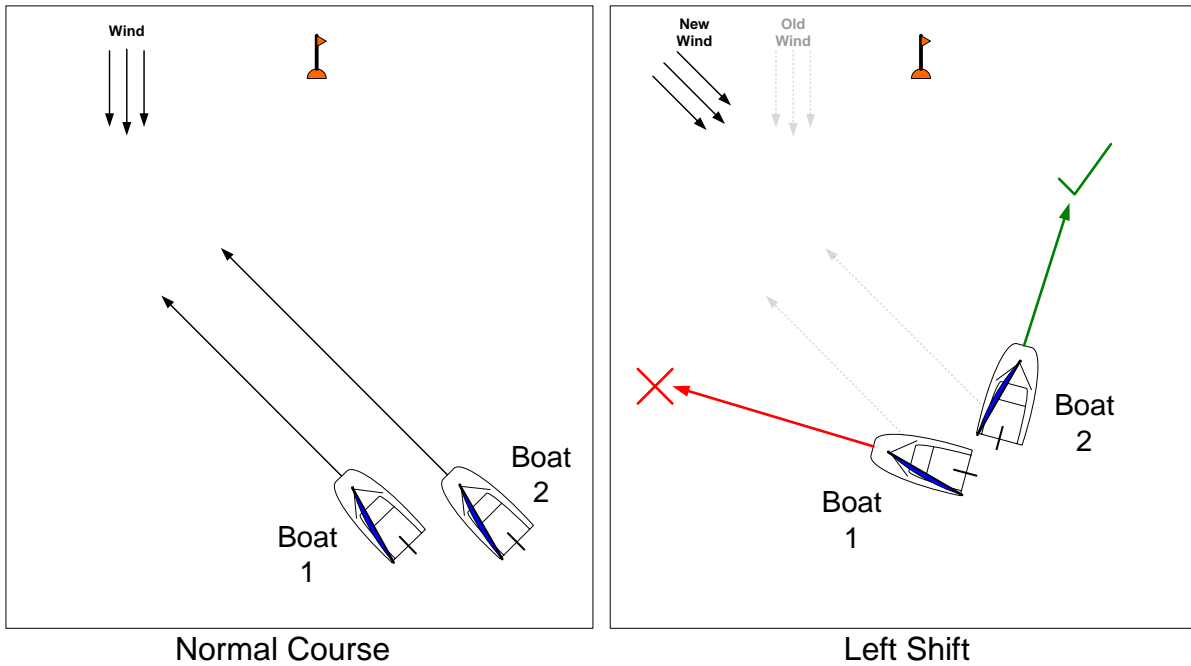
Pull away in a puff – DOWNWIND

2. Wind bands (change in speed)

- Affects where you should be on the course
 - Important in light winds or when sailing near high obstructions.
- Basic rule: look for areas where the water surface is a different colour or other boats sailing in better wind.*



- ## 3. Wind shifts (Short term change in direction) effect which tack to sail on for IMMEDIATE gain. Working the shifts in an oscillating wind can be the most important thing in racing. Pick shifts by looking at sail ribbons, the angle of other hulls & sails, flags, clouds, smoke, trees etc.

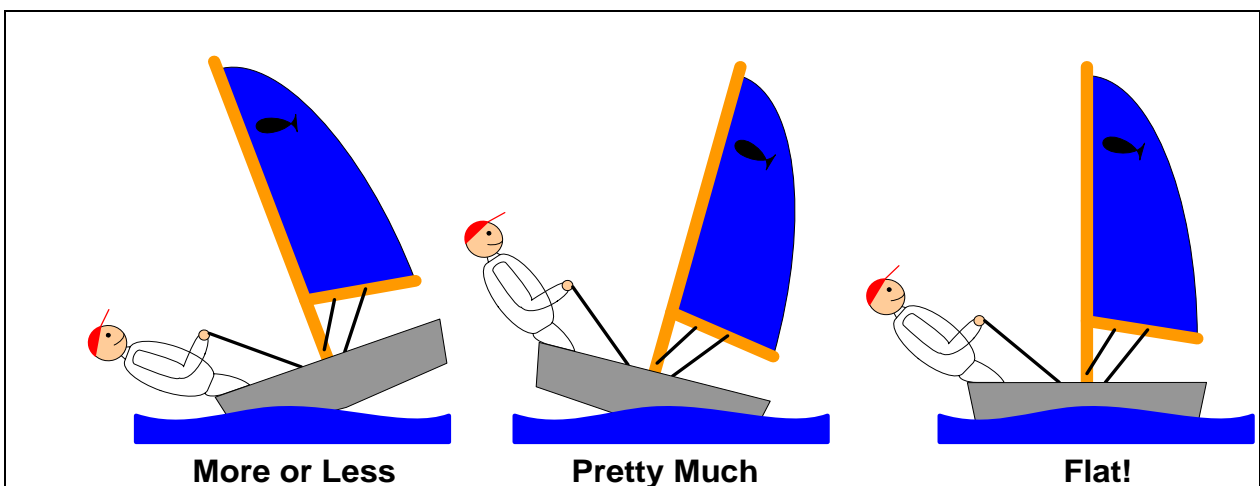


In the first picture both boats were sailing together on the same tack. In the second picture the breeze shifted left. Boat 1 stayed on the same tack and is now sailing away from the mark. This is called a “header” or a “knock”. Boat 2 tacked because on the other tack the new breeze will give them a “lift”. You can see in the drawing that now Boat 2 is aiming closer to the mark and will get to the top mark faster than Boat 1.

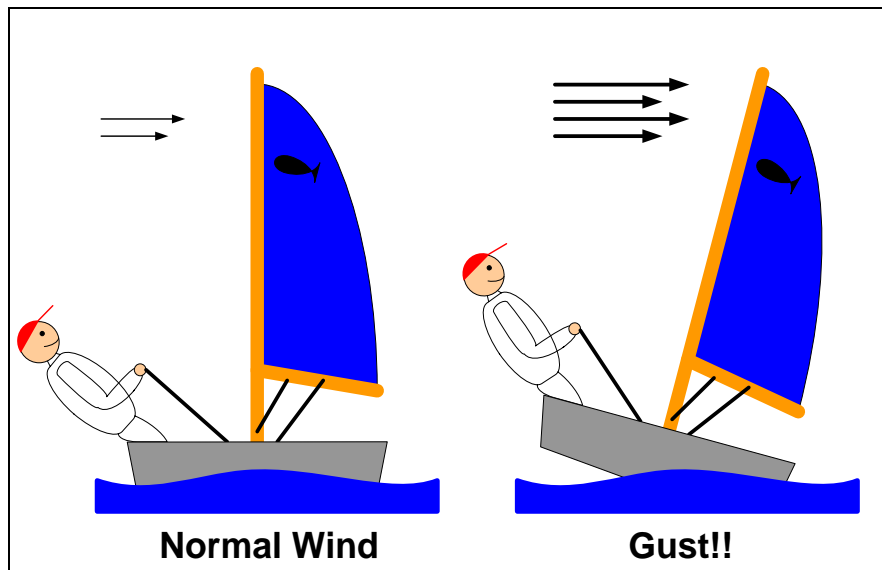
4. Wind waves (Periodic long term changes in direction)
 - Affects which side of the course to sail first. This subject is too big and complicated for this booklet and will be dealt with elsewhere.

Sailing Flat

Do you sail your boat flat?
More or less, pretty much, always flat.



Do you keep it flat even in a gust?



Basic rule:

When the mast leans to leeward in a gust move your tiller and main hands to leeward. When the mast tip leans toward you move your hand back to the normal position.

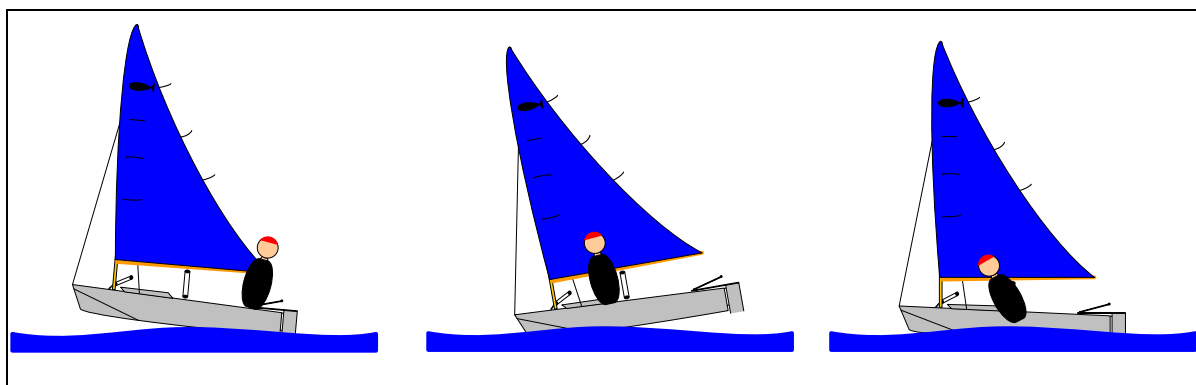
Both hands follow mast tip in a gust (mainsheet hand moves most)

It is important that your leaning out, your sail trimming and your steering are done smoothly.

Sitting Forward

Remember to keep your boat flat the other way too. If you sit too far back; the front of your boat will stick in the air. This makes your boat very hard to steer and really, really slow. If you sit too far forward you lift the back of the boat up too much it becomes hard to steer because the rudder isn't in the water properly.

If you keep it nice and flat all the time it is easy to steer and fast.



Sitting too far back

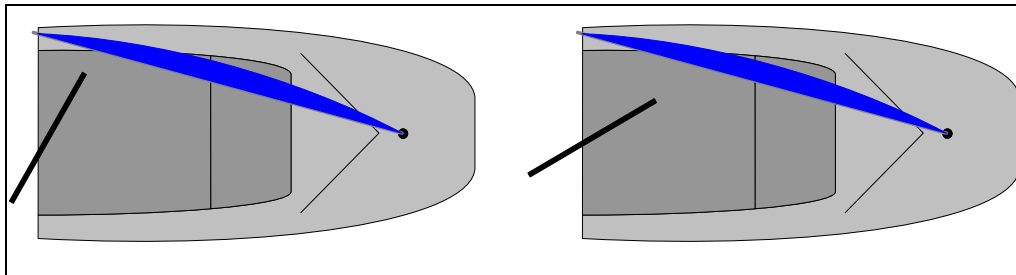
Sitting too far forward

Perfect!

Using Too Much Rudder

Another tip for going faster is to learn to steer without using too much rudder. If you use too much rudder it is like putting the brakes on your boat. Every time you push or pull the tiller all the way over water can't flow past the rudder. This will make you slow down very quickly. It also makes tacking very slow. You will turn very quickly but you will slow down heaps.

It is much better to use less rudder, for longer. This will make your tacks really smooth and you will still have good speed coming out of the tack.

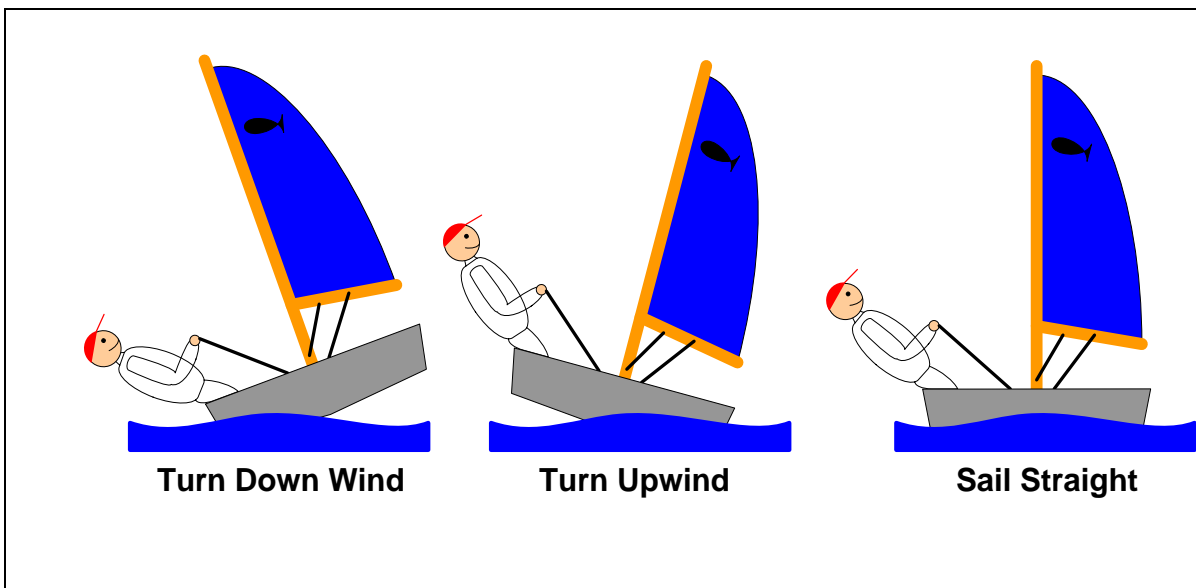


Too Much Rudder

Just Enough Rudder

Steering by balance – Downwind

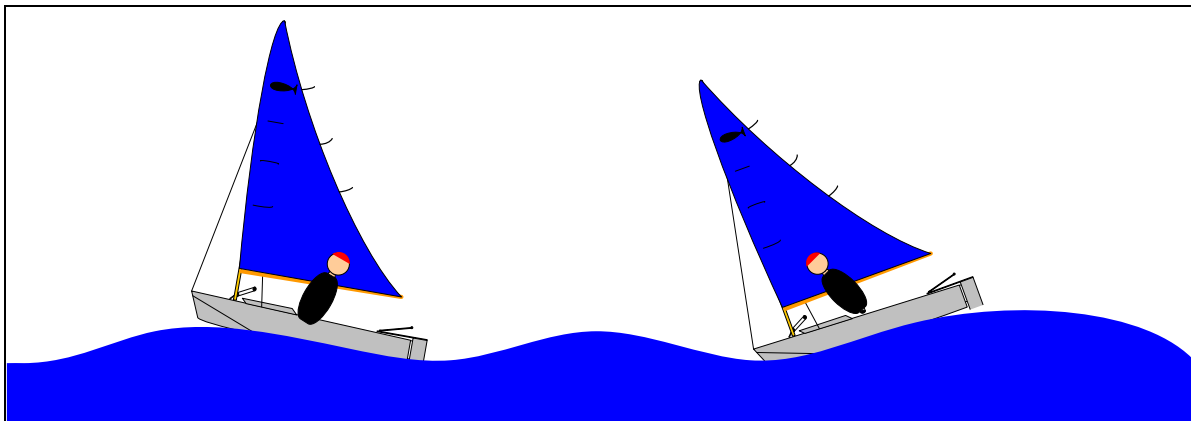
You can sail faster downwind if you learn to steer without using your rudder too much. If you lean your boat toward you it will bear away. If you lean it away from you it will steer up. If you keep it flat or just leaning toward you it will steer a straight line. This way you don't have to use your rudder and you won't put the brakes on.



Basic rule: At marks, heel boat away from the buoy to help the rudder.

Dealing with Waves

When you sail over waves, lean back a little to lift your bow when going up the wave. When you get to the top of the wave lean forward and this will help you to accelerate your boat down the wave.



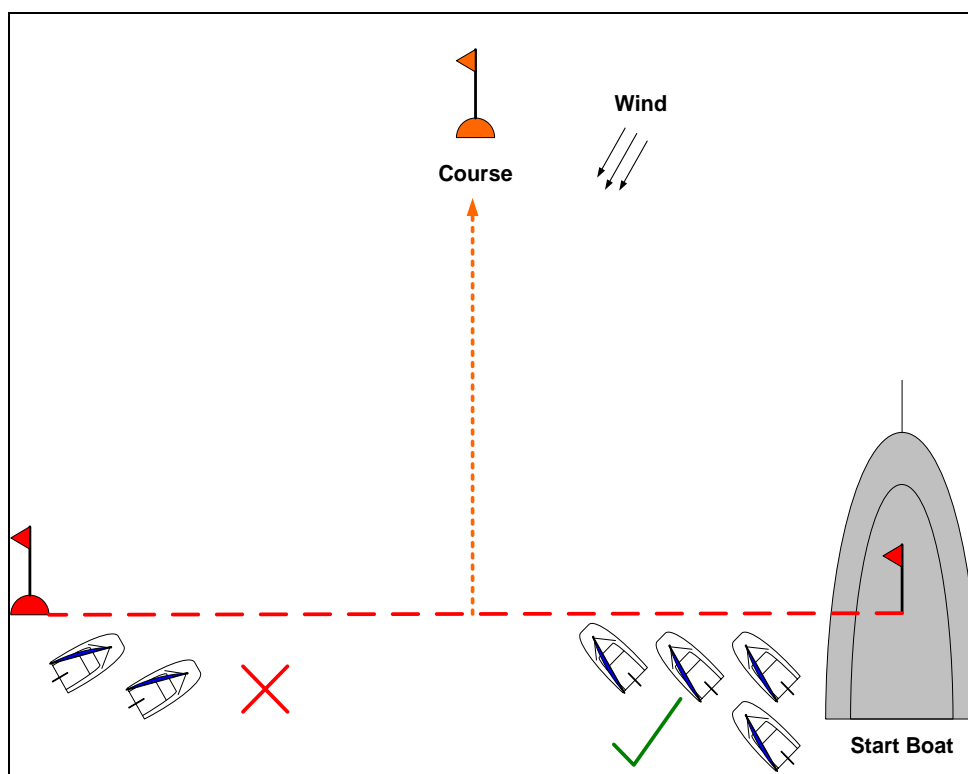
Up and Back

Over and Forward

Racing

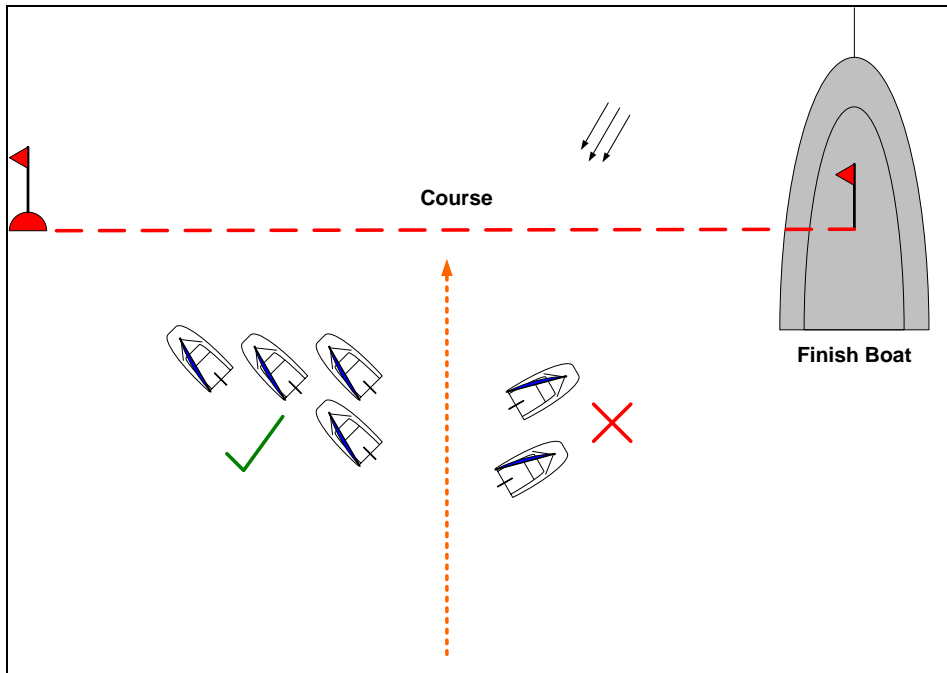
Here is a tip to help you find the best ends of a start and finish line

1. Start Line



Flags point to worst end of start line

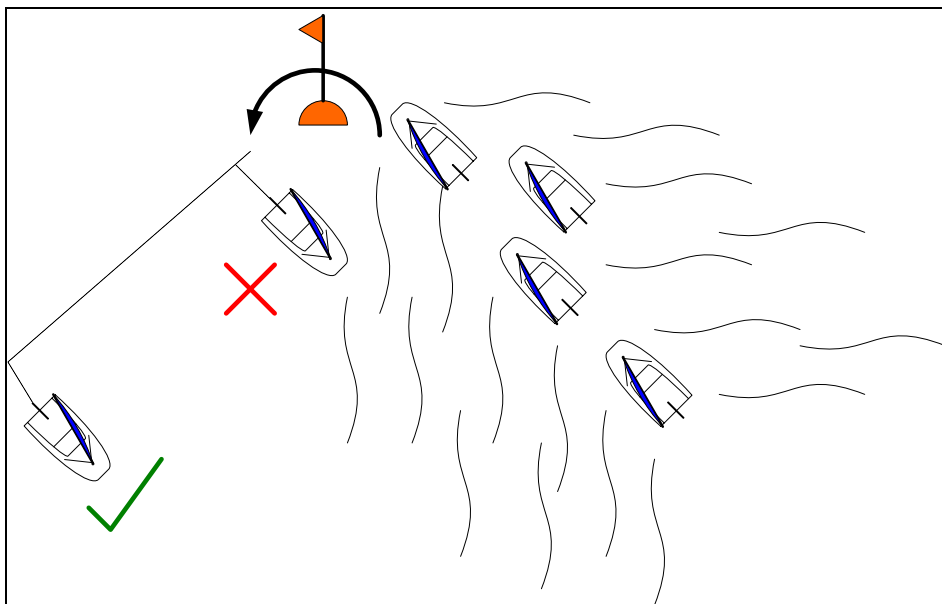
2. Finish line



Flags point to best end of finish line

3. Boat Wakes

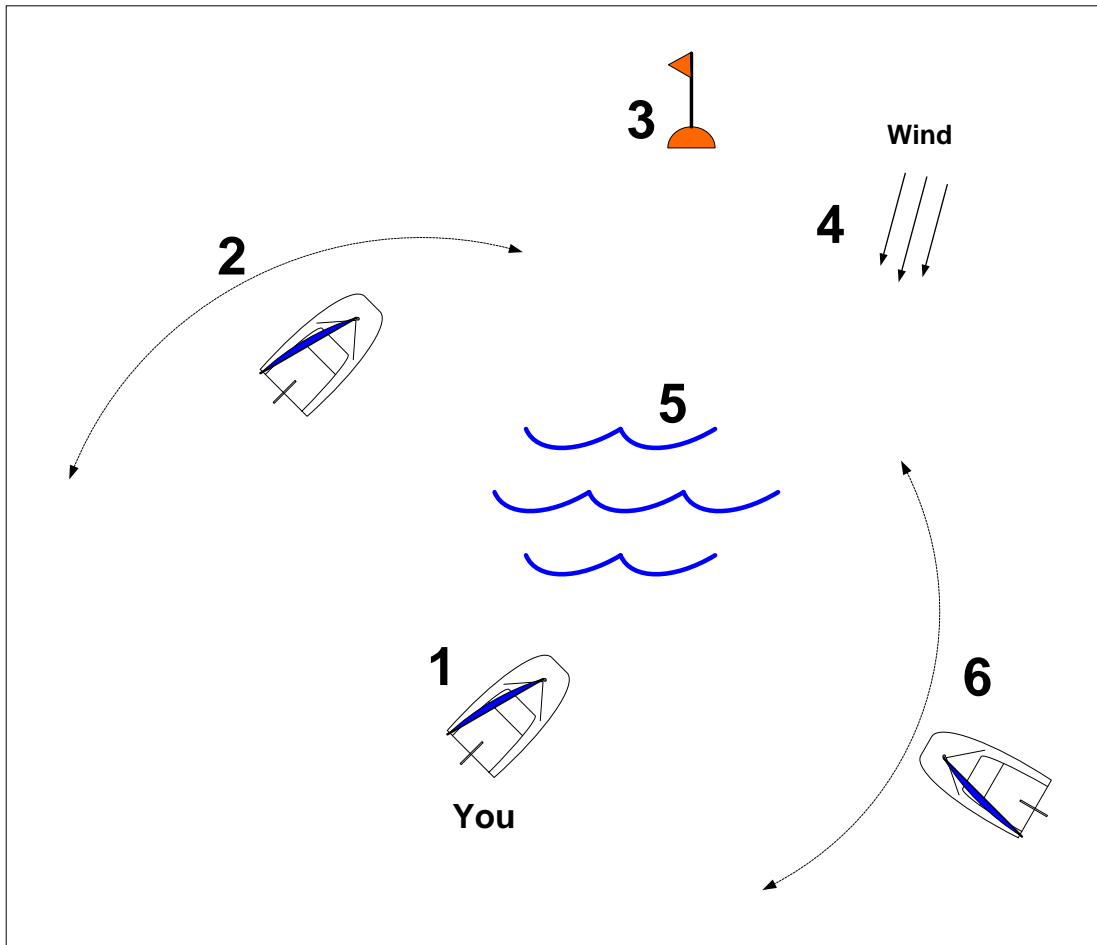
Delay your tack or gybe to avoid boat wakes. Sailing through other boats wakes is slow. Do not tack or gybe straight into lumpsville!



4. Watching what you are doing.

When you are sailing along in a race it pays to concentrate and think about what you are doing. Where should you focus your attention and for how long? The very best sailors keep looking around and they follow an inspection pattern or “Scan”.

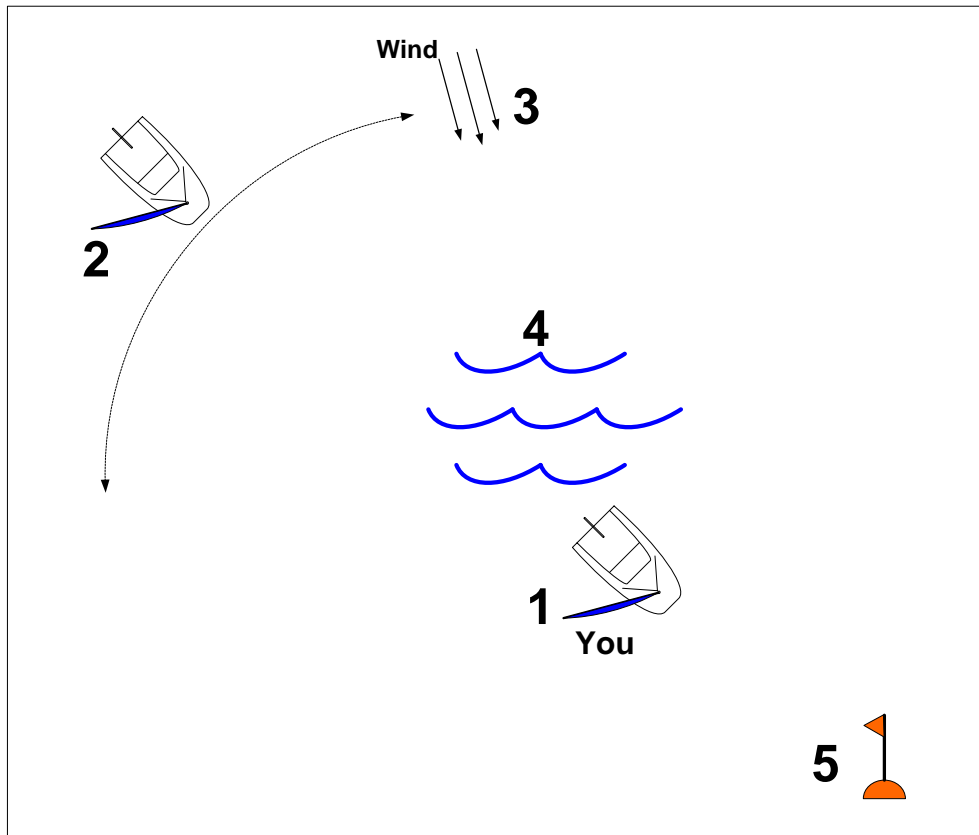
Upwind Scan



1. Your sails – Are they set right for the wind? Are the woollies flowing properly?
2. Look for other boats to Windward. Do they have better wind?
3. The next Mark. Where is it? Are you still heading toward it?
4. Wind. Is there more or less wind coming up? Gusts or Lulls?
5. Waves. Are there any waves you have to worry about?
6. Boats on other Tacks. Do you have to change course to miss other boats that are on Starboard?

When you have finished this scan you do it over again and again.

Downwind Scan



1. Your sails – Are they set right for the wind? Are the woollies flowing properly?
2. Look for other boats to Windward. Do they have better wind?
3. Wind. Is there more or less wind coming up? Gusts or Lulls?
4. Waves. Are there any waves you have to worry about?
5. The next Mark. Where is it? Are you still heading toward it?

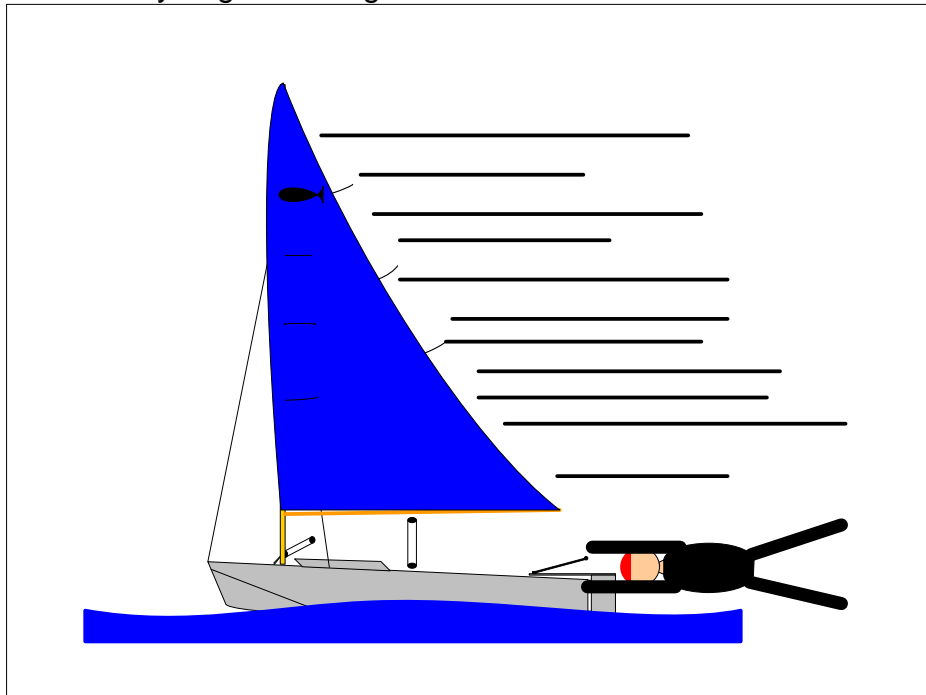
When you have finished this scan you do it over again and again.

A double jointed rubber neck helps!

Common Sense rules for good racing

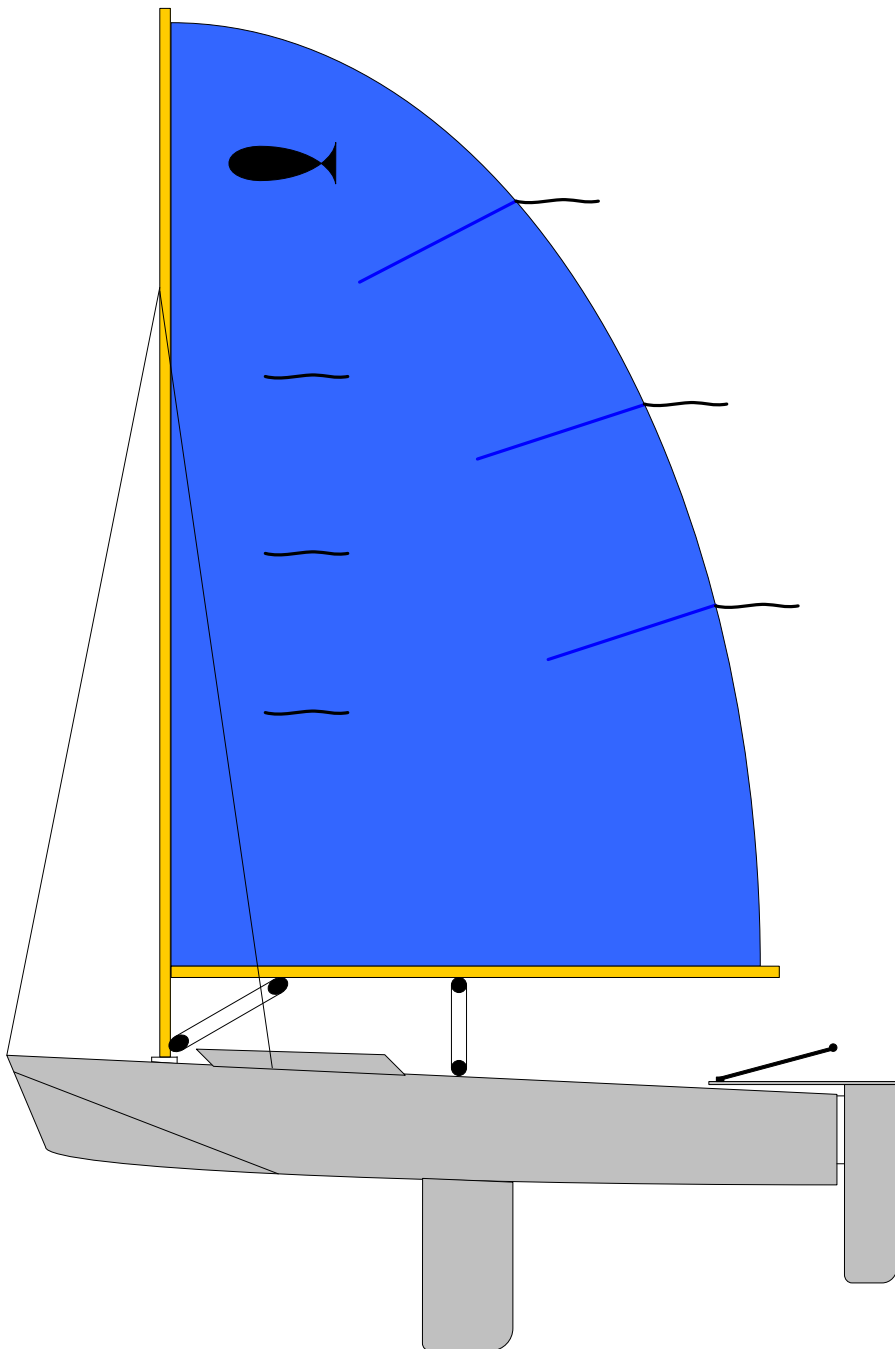
1. Model your race and sailing on the best skippers.
2. Do not go off on your own. Good skippers go in a particular direction for good reasons.
3. Do not go out to the laylines until you are close to the mark.
4. Stay between your opposition astern and the next mark, particularly at the finish.

And when you get it all together



WHOOSH!!!!

Remember, your coaches are here to help. If you don't understand anything just ask.



Happy Sailing