

Discussion of the “Global Picture” in a Match Race



by Orkun S. Soyer

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1. Introduction:

As in any art of sailing, match racing requires a general strategy backed up with tactical decisions. Here I try to outline the key components of the general strategy and discuss some of the frequently occurring tactical situations. It is assumed that the reader is familiar with match racing and has some experience in this type of sailboat racing. Hence, the basics are not covered. This document is based on my own experience, various discussions with my teammates and material that I have read over the years, including articles, interviews, and books. Reference to these sources is given as appropriate throughout the text.

2. The Start:

The start is the most important part of a match race. Against good teams, it is very difficult to recover from a poor start. Hence, the primary aim during pre-start fight is to secure a position that would allow starting on-time and in clean air. Starting in advantageous or covering positions are secondary aims. One should never distract from this primary aim, for example by trying to create a situation to give the opponent a penalty. Rules should be used to achieve the primary aim, not to create penalty situations. Obviously, one can capitalize on penalty situations when they arise.

Starting on time and in clean air. After entry to the box (Figure 1), you should be fully focused on these two goals, Let's assume we are the red boat, entering as give-way boat. In order to achieve the two goals, we need to **get out of the dial-up** situation (that arises usually when the starting line is perfectly square as in Figure 1) and **secure a correct position** in the remaining time to start.

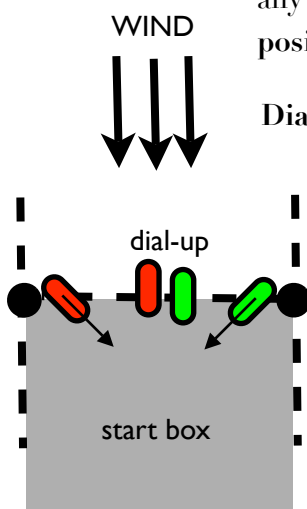


Figure 1

Dial-up. This is the most classic tactical situation in match race. After entry to box, the red (give-way) boat heads up to wind as she approaches the green (right-of-way) boat, tacks and stops on starboard tack. Green then “parks” to windward of her. Green now has to keep clear under rule 11. On the other hand, red is locked to the left and out of the box and Green is in command: If Red tacks, Green can ask room under rules 13 and 10 or tack with her and stop her from going back to the box (using rule 11). If Red bears away, Green bears away with her and stops her from gybing and going back to the box (using rules 13, 10 or 11). How can Red escape this situation? There are several options that one can take depending on how the dial up situation develops:

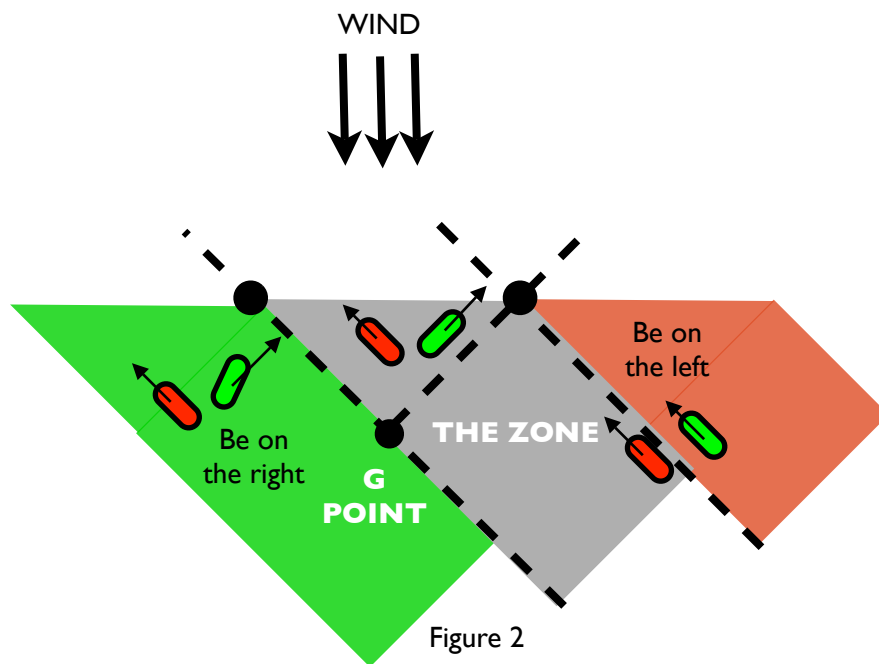
1. Red can wait for Green to drift on to her and get in trouble by rule 11. In such a case, Green would tack away, and Red should tack with her immediately. If not, Green can sail away, tack (or gybe) and come-back to re-create the dial-up. If Red could tack and stay right behind Green she could stop this from happening.
2. If Green drifts onto Red and backwards, Red could accelerate and tack. This way she might be able to bear away before Green creates an overlap (assuming that she would have tacked with Red).
3. If Green drifts forward, Red could bear away and gybe before Green could create an overlap (assuming that she would have bore away with Red). If Green drifts quite forward, Red could also try tacking and clearing the stern of Green.
4. Red could try to build up the situation in such a way that a mark or spectator boat prohibits Green from mimicking its manoeuvre and cover her.

To achieve success with any of these options boat handling is the key. During dial-up, both boats are on the wind and stopped. The boat that can accelerate faster gains a big advantage. There are several key points and tricks to be aware of (remember training session at JP Morgan regatta):

- When head to wind, **bowman should steer using jib**. Work out a simple communication between bowman and helmsman so that the former can steer as tactics require.
- Unless otherwise specified, the bowman on Green should simply **watch and mimic** the bowman on Red at all times. This ensures the advantageous position of Green to be maintained.
- **Roll-tack and roll-gybe are essential**. Minimum rudder usage and maximum coordination of sail trim and boat heel (i.e. crew positioning) are key. Having the main sail full while jib is flapping, heads the boat up. The reverse combination bears the boat away.
- For Green to ensure perfect command over Red, it should “park” **well to windward and a little behind Red** when entering the dial up. Ensure this by backing the main, and pushing the rudder to windward at the same time. This way, the boat stops quickly and drifts to back- and windward.
- Green can pretend to be drifting into a tack, and if Red falls for it and tacks, she can immediately go back to starboard tack and give Red a penalty under rule 10. This requires perfect steering by the bowman (remember case at JP Morgan regatta).

Positioning. Once Red saves herself from dial-up, or when dial-up does not arise, the boats should immediately focus on positioning. The aim is to be in a position at a certain time, from which to cross the line at the starting gun with clean air. Chances of achieving this is maximized when one stays in “the zone” as shown in Figure 2.

The dashed lines in Figure 2 indicate the laylines to the starting marks. The area between the starboard laylines to the two starting marks is the most secure place to be. From this area, we can make it to the line, independent of which side of the opponent we are. To the contrary, we cannot make it to the line if we are to the left (right) of the opponent and if we are leeward (windward) of the left (right) starboard layline. These areas are shown as green and red respectively in Figure 2.



In the red zone, be on the left of the opponent, while in the green zone be on her right. Figure 2 illustrates the “big picture” of a match race start. In order not to lose it in the heat of the pre-start manoeuvring one has to keep track of “position with respect to the laylines” at all times. Another important parameter is time. Ideally we would like to be in the middle of “the zone” with x seconds to start, where x denotes the time required to reach the starting line from the G point. There are several key points and tricks to be aware of:

- **Measure x and try locating the G point as soon as the starting line is setup**
- One team member (possibly helmsman) should **monitor boat's location** with respect to the two laylines. He/she should also call the area currently being located (i.e. green, red, the zone) (remember many previous cases, i.e. at JP Morgan regatta).
- One team member should continuously **call time**
- **Be aware of your options** and what the other boat could do at all times.
- A general rule is; **be active** when in a **bad position** (i.e. on the left of opponent in the green zone) and **be passive** when **in command**. For example if the opponent chooses to wait in a dial up situation, while you are in command, simply wait with her.
- When going right and trailing, it is best to **cross the bow of the other boat**, if she tacks or gybes (depending on time).
- **Trim sails for speed and manoeuvrability**. Use sail trim, boat heel (crew movement) and rudder in right combination to make manoeuvres as smooth (and fast) as possible.
- Always be moving, unless you want to stop. **Speed is king!**
- Sailboats sail the same speed upwind and on a broad reach. Use this fact wisely during pre-start positioning.
- Extensive rudder movements are a great way to **position the boat!** Fishtailing is a useful tool
- Be aware of **double gybes** and use them yourself as needed
- If trying to create a close situation be aware of tacks! Don't get caught on **port tack!**
- Get into **circling** if you can, it's a rather **safe way to kill time**. Be aware when to get out of it.

3. The First Beat:

You should have a general strategy for the first beat (i.e. going to the left side of the course), but you must adjust it depending on the outcome of the start. If you are trailing or in bad air after the start, the primary aim becomes limiting your loss to minimum so that you can attack on downwind. Try to brake the cover once or twice but if you see it doesn't work out, just sail to the first mark with minimum loss. If you are ahead, then your strategy becomes simple: stay ahead and on cover. If the start was even, go with your original strategy until you gain an advantage. If you gain a big advantage, capitalize on it immediately and start covering. If advantage is marginal, stay with your strategy and set up tactics so to arrive the mark on starboard tack. Important points and tricks to be aware of:

- **Don't continue a tacking duel if you see that you are losing ground.**

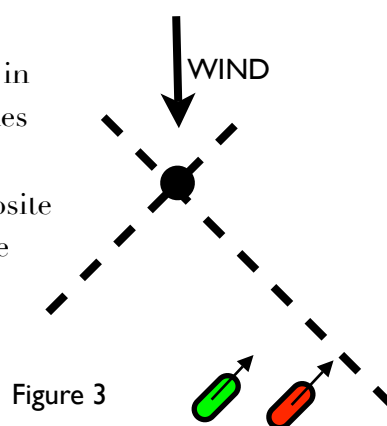
- **Never tack when slower than your opponent.**

- Always consider **number of tacks** as a tactical point, especially in unfavorable conditions. If covering, make sure that opponent makes more tacks than you do.

- If in a close tacking duel, from which you can get out on opposite tacks, get out of it going towards **the favorable side** (remember the case in Dubai).

- Always sail in the **fast mode** unless pointing is required tactically.

- A frequently occurring situation is shown in **Figure 3**. In this case, the best option for Red is to **wait for Green to tack**. Trying to point and disturb Green usually results in Red losing more ground (remember case at the event in Lecco and against team +39 in training).



4. Downwind

Frequently, people with a singlehanded dinghy background underestimate the importance of downwind legs. In reality downwind with a kite is very important both tactically and technically. Primary aim is to stay ahead if leading and get closer if trailing. Use wind shifts and gusts to your advantage. Key points and tricks for the downwind leg are:

- One team member (possibly helmsman) should **look up for gusts and wind shifts**.

- Watch the mast-head **wind indicator** or use tape placed on the shrouds. If there are no tapes on the shrouds put them yourself, they are very useful to get the angles right. Continuously trim the kite and communicate pressure with the helmsman so that you sail the most ground leeward, towards the mark.

- If close, the most important rule to be aware of is **rule 17**. Use quick gybes to brake the rule. Also be aware of tacks at all times and don't get caught on port tack.

- If leading, and the trailing boat is sailing higher, **control your anxiety** and do not sail into the trap (i.e. do not sail high with her and into her wind blanket). Keep low and close to the mark.

- Get the **kite up and down properly and quickly** (in this order!).

- Always **sail fast**, especially before the mark rounding. Do not come to the mark dead downwind! This is slow and requires a larger turn for the rounding. In such situations, **do not hesitate** to make two quick gybes and approach the mark for a tactical rounding.
- You should be able to handle the kite **without the pole** for thight and back-to-back manoeuvring. Without the pole, one teammember should immediately **act as the pole**. Keep guy outwards when sailing downwind and downwards when reaching.
- If coming from behind, always **sail to the lee** of the leading boat! Sailing to windward gives her full luffing rights (rule 17)!
- **Avoid unneccessary gybes**. Do not go into a gybing duel, unless you are confident that your gybes are better than the other team.
- **Make good use of barb-rollers** during gybing and sailing withouth the pole. They make life much easier!

5. Special Cases:

There are as many special cases as you have had match races. Usually every race is an invaluable experience. See them this way, rather than employing a “must win” view of the world. This is much more fun and much more educating. Try to discuss (well after the heat of the race) situations that arose during the race over beer and think how you could improve. Some tactical situations simply require to be lived in order to be learned and remembered. Here are various examples covering tactical, technical and rule related points.

- **Dial down** (i.e. boats on opposite tacks changing course) is a most confusing situation for both sailors and judges. The most clear explanation comes from the Norweigan international judge Marianne Middleton: Whoever gets her bow leeward of the other first, gains the right of way. If dialing down and if the bow of the other boat is on your leeward, you will be creating a collision course by further bearing away. Hence, to gain right of way, you should immediately get your **bow to leeward** of the other boat, keep a steady course and protest if she keeps bearing away.
- Another rule subject to confusion is **rule 15** in combination with rule 11. As a rule of thumb, stay clear as windward boat when in doubt. **Show the judges** that you are clearly making an effort to stay clear. As the leeward boat, wait 5 second after overlap is created before beginning your luff.
- **Taking a penalty turn** is a critical tactical decision in itself (remember Ancona). Whatever you do, make sure you get out of a penalty turn **on starboard tack**. If racing is close this is especially useful. People think that it is least costly to take the penalty turn at finish. I’m not that sure of it.
- If you are ahead with an **outstanding penalty** and it is certain that you do not have enough of a lead to complete your turn, try to **create a dial up situation** (remember JP Morgan regatta). You might be able to gybe (or tack) out of the dial up situation, which would be your penalty turn and you might still be close enough to win.
- **Always be ready to take care of fouling lines, equipment and sails**. Clear out mess quickly and efficiently. Most frequent issues are fouling of kite sheets, kite coming up twisted, pole getting tangled with the jib sheets, jib sheet fouling on the winch, opening shackles, and jib halyard coming down. In case of a twisted kite, quickly drop it half way and try to pull it open. Another re-occurring problem is kite being cought between the main and the shrouds when hoisting from the main hatch. Avoid this by throwing the kite out and easing the main slowly. Finally avoid kite

sheet going under the bow by attaching a short piece on the bow, or simply by keeping the leeward sheet tight until the exact moment of drop down.

- All **communication** with the judges should be done **by the helmsman**. Besides being the ethics, this avoids any miscommunication (remember Rimini).

- **Always be aware of the starting procedure**. It is much easier than you think **to be late**. After finish, immediately check that everything is fine and raise lima flag if not.

- If you protest, simply **protest and keep on sailing**. Your job is to protest, not to get distracted by the protest procedure (goes especially for the crew). It is very easy to lose track of things while watching the judges.

- **Avoid confusing talk** on board. Have each team member be responsible for one job and talk only about this. Everybody trying to utter some opinion about tactics or how to solve a foul situation is highly undesired.

- All teammembers should **be aware of boat heel** at all times. Pre-start maneuvering requires special coordination to execute roll-gybes and -tacks. During sailing keep in mind to be on trapez at all times if windy, and create leeward heel as required if light air. Never have too much weight on the bow or the stern of the boat.

- At the high level where most teams are capable of the basics, the outcome is usually determined by **the mental state and confidence of a team**. Try to be positive and calm before every race. As Gary Jobson puts it do not get distracted by the “name” and “outlook” of your opponents. Remember, every race is a learning experience irrespective of you winning or not.

- **Keep a professional outlook onboard**. This includes movement, gear, and voice level. Remember the mental effects of outlook. Try to have uniform team gear.