Around the Racecourse

by Steve Hunt, Sailing World March to October 2011

Part 1: Start Before the Start

Many articles have been written about what to do before the first start of the day, and while most sailors have a basic idea of what they need to accomplish, laziness or tardiness often get in the way. If you regularly find yourself unprepared or late to the start, get motivated and get to the racecourse 45 minutes to one hour before the first gun. The more "intel" you collect before the first start, the better off you'll be.

Once you're on the racecourse, there are three essential things you must do: make sure you're going fast, figure out the wind, and research the starting line.

Step 1: Gather your wind readings

Skip Whyte, my Olympic 470 coach for many years, often said that, on any given race day, there are different waves of tuning groups. The best sailors get out early and sail upwind before the mid-fleeters get to the course. If you want to win, you need to get out early and join the first group. While your team is sailing upwind and tweaking sails and rig for speed, your tactician should be figuring out the wind pattern.

The key is to watch the compass and determine a range of headings on each tack. For example, on starboard you may be sailing between 220 and 240 degrees, and on port you may be sailing 310 to 330. The wind is shifting through 20 degrees. You should also try to determine the timing of the shifts. It's not an exact science because the wind changes often, but getting the feel for a pattern will help you make educated decisions while racing. Once you have a feel for the pattern, note the true-wind direction by finding the midpoint of all your headings. In this case, it's 275 degrees. The tactician should also be looking around for other important tactical factors, such as current, potential geographic shifts, and varying wind conditions across the racecourse.

Step 2: Find your fast settings

When tuning up with the good teams (or a designated tuning partner), compare your relative height and speed. In general, if you're pointing well but not going forward, make your sails flatter. If you have speed but no height, make the sails fuller and tighter leached, especially the main. If you're lower and slower, something, or many things, are off. Make sure you're set up according to your sailmaker's tuning guide, experiment with different settings, and ask your tuning partners how they're set up if they're beating you.

Once the first tuning group reaches the top of the course, its time to go downwind. If you determined you needed to change the rig, now is a good time to do so. While sailing downwind, try different angles and techniques to figure out what is fast for the conditions. When you're about halfway down the run, start looking for the second wave of boats tuning upwind. Find a preferred competitor, douse your kite early enough to get your boat reset for sailing upwind, and join them.

Now test what you learned during the first tuning session and continue watching the compass and looking around.

Over the course of your second lap, you'll become much more comfortable with your boatspeed and the wind patterns. If you're sailing a hiking boat, this pre-race tuning also helps your body get warmed up and ready for action. The benefit of tuning before the race is it allows you to gain confidence in your settings and boatspeed, freeing you up to look around while racing. Unprepared sailors spend a lot of energy with their head in the boat trying to go fast, and their tactics suffer as a result.

Step 3: Research the starting line

Once you've tuned twice and collected course data—headings, current, and pressure differences—it's time to take a breather. Drink water, eat a snack, and make any final tweaks to the rig. It's also a good time to process the data you've collected and start building your game plan. If you got to the course an hour before the start, you should have about 15 minutes left. Start monitoring the race committee.

Once the committee sets the line, go back to work. It's important to do more starting-line research than you think you should. Truly understand the whole "starting box," as match racers call it. The starting box is the area defined by the laylines to the pin and boat ends and the actual starting line.

To get a line sight, sail to one end of the line, on the side opposite the land, and sight through the race committee flag, picking out an object on land—a building or tree, for example—that's in line with both ends. Then, run the line using this sight to get a feel for what it looks like to be right on the line. The longer the line is, the greater the illusion you're on the course side when you're actually not. This is especially true in the middle. (Paul Elvström says that, because of this illusion, when starting in the middle of the line, he makes himself feel like he's half a length over.) Get used to the feel of being on the line and trust the sight. If there's no line sight available, use a compass heading to run the line. Find the heading by luffing up to one of the ends, inside the line, then aim at the other end to get a compass direction. Run the line sticking to the compass direction to keep you on the line. Run the line three times, looking back and forth the whole time.

During one of your runs, time how long it takes to sail from one end to the other. This will help you position your boat on the final approach. This is a great assignment to give to a crewmember with little to do.

Next, find the boat and pin laylines. You must start in between them (inside the starting box), and if you start near an end, the laylines play a big part in your strategy. To find them, set up a few lengths off the committee boat end of the line (30 to 40 seconds away) and head up on a close hauled course on what you think is the layline; do the same with the pin layline. If you're off, do it again.

Top match racers check their starting laylines over and over again before the sequence, especially at the end at which they plan to start. This drill also helps you practice heading up (which you do in the last few seconds of the start). Plus, every time you reach close hauled, it allows you to track the wind by checking your compass angle. The shiftier it is, the more beneficial the drill.

During your starting-line research, put the bow into the wind a few times to check the line bias and to track the true-wind direction. I recently sailed the Championship of Champions and witnessed Jud

Smith doing this more than anyone I'd ever seen. Jud and his daughter Lindsay won the practice race and first two races of the championship, and they did more wind shots than anyone before each start.

Step 4: Double-check before the countdown

Now that you've completed your research, you should have a great understanding of the starting box. Do a brief upwind sail again to see if anything has changed. Check your compass again and make sure the boat still feels right for the conditions. When heading upwind, observe your angle compared to the line. Visualize how the fleet will come off the line at that angle and factor that into your final game plan. Your angle off the line should correspond to the favored-end research you did. If not, then there's either been a shift, or the committee moved the line.

You've collected a lot of data and tuned your boat for the conditions. Now it's time to finalize your game plan and get a great start. In our next two installments, we'll discuss how to do this. But for now, you should feel knowledgeable, confident and ready.

Part 2: Plan to Plan

Now that you've been on the racecourse collecting data for an hour (you have been, right?) it's time to make a game plan. It's essential to have a plan, even if it turns out to be wrong. It allows the whole team to focus on an objective, and in the heat of the moment, when quick decisions are necessary, the game plan serves as a guiding light. If you take the "wing it and see what happens" approach, I guarantee you'll be indecisive when it really counts.

When making a plan, factor in all of the data you have been observing before the race. First and foremost, you'll want to put a lot of emphasis on taking advantage of the favored end of the starting line. The race will be much easier if you're ahead early. At one point during my 470 Olympic campaign, I was having a tough time starting so I asked eventual gold medalist Paul Foerster, who had dominated a regatta, what he thought about when deciding where to start. "I start near the favored end," he replied. As I walked away I felt very foolish for asking, but it really is that simple: make it a priority.

In addition to starting near the favored end, you need to sail toward whatever racecourse features you think will help you the most tactically, and most immediately. This is, of course, one of the main reasons you got to the racecourse an hour before the start and tuned up and down a few times. During that time you should have gotten a feel for the conditions and started to notice what was important, relative to the wind and current. You will find that, most of the time, sailing in more wind and sailing toward the mark are the main factors that help you do well, especially in extreme cases. But sometimes other factors must be given priority, especially when the wind velocity and direction are steady. Sometimes, sailing toward favorable current or a geographic shift makes it to the top of your plan. And sometimes it's a mix of factors that will end up working best, such as playing the shifts while working toward a side for favorable current.

Let's say you observed that it is really shifty, so your best plan is to get a good start and sail the lifted tack. Or maybe you noticed there was always more wind on the left, so your best plan is to get a good start and sail left. Or maybe you know the tide is a huge factor, so your best plan is to get a good start and play the tide. Each race is different and that is what makes sailing so much fun.

Sometimes your plan can be modified at the last second, especially if something significant changes, such as the favored end changing due to a big wind shift or even the favored end becoming so crowded you deem it too high risk.

I will never forget the second race of the 2008 Etchells World Championship in Chicago. It was the first race of the day and we determined there was more wind offshore, which was left, facing upwind. Our plan was to start at the pin end and go left for more pressure. As we set up for the pin on our port-tack approach, skipper Bill Hardesty called an audible. Rather than tacking into a hole near the pin he kept sailing and said, "the guys down here will fight to the death for the pin and we don't want any part of that."

As the clock was winding down, we found a hole further up the line and had a clean start about one-third of the way up the line. The yelling and screaming coming from the pin end after the start was music to our ears. I looked under the boom to see three boats head-to-wind at the pin, one of them hung up on the anchor line. Our lane turned out to be perfect, and mixed with good boatspeed, we were able to hit the left hard, and win the race.

We did the same thing the next race as well and those two bullets did everything for our scores and confidence to win the event. The takeaway for me was that Bill had the foresight—based on his knowledge of those competitors—to understand that executing our original plan was going to be very risky. He modified the plan in the final two minutes to increase our chances of sailing clean toward the left side, which was more important than winning the pin. The key is to have a solid plan, based on pre-race research, that will guide your decisions early in the race.

Before the race starts, verbalize your plan to the team. Involving all crewmembers is a great way to get everyone on the same page. It can also help you consider some tactical factors you may have not considered. Another benefit of discussing the plan with the group is that it helps others buy in to the plan, which brings everyone together and helps the team anticipate future moves.

With a game plan in hand, you can start working on the nuts and bolts of getting a great start. We'll get to that next month.

Part 3: Starting Made Simple

In the first two installments of my ongoing series in this space, we've learned how to make use of our pre-race warm-up, and how to make a game plan worth sticking to. That's all fine and good, but only if you can capitalize on that plan with great start. Let's get to it.

Most successful races begin with a clean start near the favored end, allowing you to sail fast for the first few minutes. While you're sailing fast, those with poor starts are fading back, stuck in bad air and water. Once they're done for, the racecourse opens up, and it's much easier to sail smart and execute your game plan.

I love great starts, and Paul Elvström does too! He once said he puts 90 percent of his "race energy" into the start, knowing that if he shot out ahead of the competition, he gets a rush of excitement and adrenaline, prompting him to hike hard and sail fast. There's a lot to be said for a confidence boost right away.

Getting a front-row start consistently is easier said than done, but there are definitely rules-of-thumb to follow and "plays" you can use in different situations to help you pull off a good start on a regular basis. These rules are all designed to help you be on the line, with speed, at the gun. That's your No. 1 priority.

To be on the line, or slightly behind it to be safe, at the gun, it's necessary to have a good understanding of where the line actually is. This comes from sailing up and down the line a few times before the start, calibrating your eye and from practicing how to accelerate your boat in specific conditions. Your mission should be to become the master of time and distance in your specific boat. Every boat accelerates differently, and conditions play a large part as well.

This understanding is an art form that can only be mastered through practice. The teams I sail with make time and distance practice a fun exercise. We are always challenging each other to guess how long it will take get from where we are to a specific point, such as the pin end of the starting line, a lobster pot, or channel marker. For example, I might say, "OK team, how long will it take to sail from here to the pin? I'm starting my watch now, and I'm guessing 43 seconds." Then, everyone guesses, and the closest one wins. It's fun, challenging, and a great way to get everyone in tune with time and distance.

We also practice starting before the actual start, giving ourselves a 2-minute sequence and setting the goal to "win" the pin or boat, whichever end we are near. The goal is to be at full speed, sailing close hauled for at least a second or two before the virtual starting signal, and have the bow hit the line with perfect timing. If we don't nail it the first time, we do it again.

Once you feel comfortable with where the line is and your time and distance abilities, getting a good start is only matter of positioning your boat in a space that allows you to execute your skills.

What's the best way to find an open space on the line, one that allows you to accelerate and hit the line with full speed? I recommend a port-tack approach. With a port-tack approach you're sailing against the grain because the majority of boats are on starboard during the final minute before the start. While sailing on port, you can scan the line looking for open spaces. Don't just look in your immediate area. Scan the entire line to spot less congested areas. By sailing against the grain on port-tack, more spaces will become available to you, where as, if you're buried in a starboard-tack group, with everyone creeping toward the line, the scenery rarely changes, and you have fewer options.

On your port-tack approach, spot your destination and tack into the space, tacking underneath a starboard tacker and briefly luffing to develop more space to leeward. This will be your runway to accelerate when the time comes. A useful trick is to pretend you're going to keep sailing past the starboard tacker, not making eye contact or heading up toward them, and then tack at the last second from almost astern of them. Doing so keeps the starboard tacker from defending against you and gives you a strong hidden (from the race committee that is) position to leeward with maximum runway between you and the starting line. If time is running down and no one is coming to steal your hole, it's now just a matter of accelerating and having accurate time and distance.

Defensive Plays

If nearby boats try to poach your hole, you have to fight to protect it. Typically, boats try to steal your hole in one of two ways. They come from behind on starboard or use the port tack approach. It's easy to get involved with the boat to windward and lose sight of others approaching, but you have to

keep a vigilant watch and be aware of your surroundings. This is a great time for crewmembers to help by looking around and communicating potential threats to the skipper (maybe assign one person exclusively). The key is to defend your hole before you lose it.

On one of the more successful teams I race with, Alan Field's Melges 24 team WTF, we've made up names for hole poachers: bogeys and sharks. Bogeys are port tackers and sharks are coming from behind on starboard. By naming these intruders Alan knows exactly where to look when we notify him. I may say, "Potential shark coming," or "Bogey coming in hot."

If a shark is approaching, bear away, and match their speed before they hook you to leeward. While reaching in front of them it sometimes helps to tell them to go above you and point to the hole you just created. Once they head up, you then luff up, pinning them, and re-creating as much of a runway as possible for your acceleration.

Another technique to defend against sharks is to sail across your hole toward the next boat to leeward, making your hole much less appealing and possibly too small for the shark to fit. Ideally you make the hole just less than a boat width, but no smaller. Often the shark will be discouraged and continue sailing looking for a bigger hole. After using this technique you have to work hard to develop a hole to leeward again. A tight main and loose jib will help you climb to windward as much as possible before bearing away to accelerate. You now have a smaller hole than before but at least you have some room to get moving. If you get hooked late in the sequence, you're in serious trouble.

When a port-tack bogey comes lurking, bear away early and aim at them, or aim at the space you envision them tacking into, putting them in a tough spot under the rules. By aiming at them and sailing fast you force them to tack before they want to, or bear way and duck you looking for an easier hole to steal. Use the speed you generated by bearing away to luff hard, maybe slightly past head to wind (as long as you don't foul anyone), to create as much of a hole to leeward as possible.

The more crowded an area you initially find, the greater chance there will be poachers trying to steal your hole. The bigger the space you find on your port-tack approach, the better.

Important Rules of Thumb

When you are sailing back and forth in the last few minutes looking for lesser congested areas and timing out your final approach, keep your options open to tack or jibe. Slow down or speed up to break overlaps with boats preventing you from tacking or jibing. You can slow down by swerving or luffing sails.

During your final approach a trailing boat can be a serious threat. When jibing onto port for you're your final approach, pick a space where no one will be close behind. If someone is following you close astern, they have the option of tacking under you as you tack under a starboard tacker, thereby claiming your hole. A nice move when someone is close behind you, which usually catches them off guard, is to luff head to wind quickly with a hard turn. Usually the trailer will keep sailing past you, at which point you can bear away and now you are the trailer. Finally, avoid stopping completely if you can. It's best to keep some flow over your blades and sails during the final 30 seconds, especially just before you accelerate. Doing so helps you get up to speed much faster.

Tying it all together

During your pre-race research you sailed up and down the line a few times using a line sight, getting a feel for the line. You also practiced a few accelerations at a mark to calibrate your time and distance for the conditions. You have played the time and distance game with the crew so your time and distance estimates are fairly accurate when estimating which open spaces are available to you on your final approach. As time is winding down in the sequence you are keeping your options open to tack or jibe while sailing back and forth. Now in the last minute or so you execute the port tack approach, making sure there's no one on your tail, and you find a sweet open space. You position yourself in the open space by lee-bowing a starboard tacker from a deep position almost near their stern. You and your crew stay alert and aware of any poachers, using defensive plays against them. Now it's just a matter of putting your boat on the line, with speed, at the gun.

Part 4: Take a Low-Risk Beat

Assuming you're enjoying the benefits of a great start, it's time to settle in and sail fast for a while, letting those less fortunate fade away, and most importantly, allowing the racecourse to open up so you can control your race. From here, it's a matter of sailing a low-risk beat, which means three things: sailing in the most wind available, sailing toward the mark, and sticking with the fleet. These are your most important goals and executing them will minimize your risk more than anything else. Another key is to keep your boat in a lane that gives you clear air, so protect your breeze by anticipating what others around you will do.

One of my top high-school skippers, Jake Reynolds, summarizes his game plan in a simple way: get a great start, sail fast, and stick with the majority of the fleet. By getting ahead early and sailing fast around the course with the majority of the fleet, he improves his odds of having a good race. The result? He has won six of his eight high-school regattas and placed third in the other two. That's consistent.

Buddy Melges, another great mind in sailing, has a similar perspective on low-risk sailing. If you like the right, he says, position yourself just to the right of your competitors. If you like the left, position yourself just to the left. It's that simple. There's no need to sail off by yourself, splitting from the majority, hoping for the horizon job, because if you're wrong, you'll find yourself deep at the top mark and unable to catch up. By positioning yourself in the proximity of the favored side, you'll be in contention if you're right, and if you're wrong, you'll still be close enough to have a decent comeback. Taking a huge risk by splitting creates more of an all-or-nothing outcome. Winning regattas (or simply doing well) is more about avoiding bad races than it is about winning a few and placing deep in the others.

Having the mentality to play it safe requires discipline. It's easy to let greed get the best of you and to keep sailing to the corner by yourself, hoping for the big win. If you really like a side, get to that side of the competition, and then go with the flow. The only time sailing to an edge is safe is in really light air, when the edges tend to have more wind and the middle is disturbed. My dad, who is a light-air expert, used to tell me, "You have a 50-percent chance of getting the edge right in light air, and a 100-percent chance of being wrong in the middle." He's always right.

Another thing I've learned is going the right way usually feels right. If you're splitting from the fleet and hoping you're doing the right thing, you're usually wrong. Sometimes despair creates the motivation for a big split, and it's usually brought about by being behind. Resist it. To be a winner, you have to control your emotions and do what is right. Remember, the wind doesn't care what place you're in; it's going to shift regardless of your feelings, so stay in the wind and sail toward the mark. Let the other sailors go the wrong way and pass them when they do.

To be safe, if your game plan off the start is to go right early in the leg, and you had a great start near the committee boat, go with the fleet until others start tacking, and then tack and go with them. By doing so, you stick with the majority a little longer and reduce your risk should that right side not pan out. If your plan is to go left, your front-row start has set you up perfectly. Just sail fast.

If your start is not good, priority No. 1 is finding a better lane. This is a critical moment that can define the rest of your race, so you must get it right. It's often best to be patient shortly after a bad start and wait for an open escape route. If you tack and have to sail deep, ducking a lot of boats, it's hard to make up that lost distance. Usually, boats blocking your escape route had bad starts, too, and they'll shortly tack away. No one likes sailing in bad air, so evaluate the lanes of those blocking you and determine if they will tack shortly or not. Once your escape lane opens up, tack and sail behind a few boats, hopefully emerging into an open lane. Once you're free of bad air, it's time to sail fast and smart, play the shifts, and see how many boats you can pass.

The more extreme the wind or shifts are, the greater precedence you should give them. For example, if the left side of the course has much more wind than the right side, it's OK to sail a header to the stronger wind, and then sail the long tack toward the mark. The speed you'll get from the increased wind will make up for briefly sailing away from the mark. If the shifts are big, or the course is such that one tack is obviously much longer than the other, make sailing toward the mark your top priority. In an ideal world, you should sail in the most wind and sail toward the mark. If you can make that happen, and you often can, life is good. When the windshifts are small, and the wind is consistent across the course, it's more difficult figuring out where to go. In these races, getting a good start, minimizing maneuvers, and sailing fast is usually the best game plan.

Figuring out exactly how to sail a low-risk beat and doing the right thing is much easier if you arrive to the course an hour before the start and gain some insight into how to play it. Your pre-race homework will help you make educated decisions. The more you know, the more accurate you can be with your tactical calls. And for the times when you're not sure what to do (you got to the racecourse late), be safe and go with the flow.

Part 5: Clean Roundings, Every Time

The key to getting around the top mark clean is to look around early, evaluate how those around you will come together, and plan to avoid the major pitfalls. I've made enough mistakes at the top to know that overstanding, bad air, fouling, huge ducks, and the most painful of them all, having to jibe out because you can't make the mark, never contribute to a successful race. To avoid these race killers—and maybe even make some easy gains—there are a few rules of thumb to follow. If you stick to these rules, you will find the top mark a place to make a move, rather than mistakes.

Monitor the starboard-tack layline

Avoid setting up early on the long starboard-tack layline if you're working the right side of the course. Unless you're among the top few boats, enjoying clear air all the way into the mark, tacking on the starboard-tack layline far away from the mark usually nets some degree of loss. This is especially true when port-tack competitors ahead of you come across and stack up on the layline, leaving you in bad air or forcing you to do two clearing tacks and overstand the mark. Neither outcome is good.

If you're more than a minute from the mark, consider tacking beneath the lead group on the starboard layline, with clear air, usually 30 to 50 yards below the layline. When you set up underneath the layline, make sure you set yourself up with a lane to tack back and get to the starboard layline when the timing is right; don't tack directly underneath a starboard tacker that can pin you. In this inside lane, you will usually enjoy clear air longer, and, if you do get tacked on, you can do two clearing tacks without overstanding. As you get closer to the mark, the key is to get into the starboard parade before it's too late. It will be tempting to sit there on the inside lane, enjoying the gains as you get closer and closer to port-tack layline, but if you wait too long, a hole in the parade to tack into will be harder to come by. Get in before all the openings are gone.

Avoid the port-tack layline

Unless you're with the top few boats, or have plenty of open space to tack around the mark, avoid the port-tack layline. Bad air from any boats sailing the offset leg and setting spinnakers can really slow you down. More importantly, tacking around the mark inside the three-length zone is asking for trouble under the rules. A Two-Turns Penalty certainly does not help your race, so be safe. The smart sailors who come in from the left do so four or more lengths below layline, putting themselves in a position to tack safely outside the mark zone when converging with starboard tackers, and a little farther away from the bad air zone at the top.

Anticipate what others may do

As you get to the top of the beat, it's important to anticipate how the weather-mark rounding will play out for you and those around you. If you know your competitors well, you can usually predict what most of them will do. The more experienced teams will usually do what is best for them, and the less experienced teams tend to be a bit random. The more accurately you can predict what will happen, the better you can dictate your own mark approach.

Have an exit strategy

In addition to thinking about how you will get around the top mark cleanly, you should be thinking about your downwind exit strategy. Going the right way downwind equates to immediate gains. I like to keep it simple and determine whether I'm going to set the kite and go straight or jibe shortly after setting and go left (looking downwind). In extreme right shifts we may even call for a jibe set, as long as the bad air from those still sailing upwind won't hurt too much.

Having a plan for the downwind leg is important because it lets the skipper know whether to protect the high lane for clear air, or work low through the rounding, setting up for a jibe as soon as possible. If you want to go straight, you must protect the high lane. If you want to jibe early in the leg, you can sail deep and jibe once clear from the top of the course. Either way, you must pay strict attention to any overlaps while on the offset leg. If your plan is to jibe early in the leg, or jibe set, you don't want

anyone overlapped to leeward, preventing you from jibing, so slow down momentarily, if you have to, and follow into the mark. If you want to go straight, you don't want anyone above that may eventually roll you. If you've got someone stuck on your weather hip, threatening to take your wind, you can delay the hoist for a moment, and head up to protect your breeze. Slow down to break overlaps below or hike hard and go fast to set yourself up for what you want.

If you follow the rules of thumb we discussed you will start thinking about the top mark rounding well before it happens. You will also determine whether you want to set and go straight, or jibe shortly after the mark. Given that information, you will make the best plan to get around the mark clean while avoiding overstanding, prolonged periods of bad air, and race-killing fouls. If you come in from the left side, you will do so four or more boat lengths under port-tack layline. Once around the mark you will make sure you are setting up properly to hoist and sail straight in clear air, or sailing low ("soaking") to ensure you can jibe early in the run without anyone blocking your escape.

Lastly, if you're unsure what to do, be safe. It is sometimes mentally hard to do a big duck when you can almost cross someone on starboard-tack layline, but being conservative in those situations is the right thing to do. If a hard, last-minute duck is looking likely make sure the crew is ready for it; ease the sails through the duck so the rudder doesn't stall, then trim the main in hard to head up and tack. In the Melges 24 we have one crew go legs-in to trim main for these ducks because it is a lot of sheet for the skipper to deal with. If you're fast, you should be safe with the mindset that you will pass them later in the race. If you're slow, taking a little more risk from time to time is OK, as long as it is calculated risk and not foolish sailing. A penalty turn is a lot slower than ducking a few starboard tackers. Be smart, sail fast, and pass boats at the top mark.

Part 6: A Low-Risk Run

Now that we're around the weather mark, we're looking to have a productive downwind leg, focused on staying in front of any boats in the rearview mirror and passing nearby competitors. The essentials to the downwind leg are the same as they are for the upwind leg: stay in the most wind and keep your bow pointed toward the mark. Your tactical focus should be on these two criteria. Remember, having a good lane means you're sailing in more wind than someone who's in a poor lane.

Before rounding the weather mark, you lay out a plan for which way you want to go downwind. This decision will be based on the wind direction and where the most wind is as you round. Your goal as you start the run is to sail the headed jibe toward the leeward mark, whereas upwind you sail the lifted tack. You also want to stay in the most pressure available (positioning your boat in the patches of water that appear darker).

If you're sailing in a left shift as you round, you'll want to set your spinnaker and sail straight downwind on starboard tack. If you're in a right shift as you round, consider jibing to port as soon as possible. How soon you jibe depends on the size of the shift and how much disturbed air is at the top of the course. A 15-degree shift or more warrants a prompt jibe. Anything less typically warrants waiting a few boatlengths, unless there's minimal bad air at the top: if the fleet is spread out, for example. Most of the time, setting the spinnaker and sailing straight (going right looking downwind) to get away from the bad-air zone created at the top of course is the prudent move.

If it's urgent to get left (looking downwind), it's fine to jibe early after setting. But be aware that disturbed air from the upwind boats will slow you down until you get well clear of them. As long as the long-term gain from jibing early makes up for the short-term loss at the top of the course, it'll be a smart move. If it's not crucial to jibe immediately, but you want to jibe, sail for at least 30 seconds and then put in your jibe, extending away as much as possible from the disturbed air at the top.

If you've continued sailing straight (to the right looking downwind) you'll need to jibe away from your group at some point, and the timing here is critical. I usually prefer to jibe just before everyone else in my group so we lead away on what is now the long tack. The longer you wait before jibing, the longer the other jibe becomes, but also the more likely boats around you will start jibing. The challenge is to wait as long as possible but still lead away. As it gets closer to jibe time, watch for signs on other boats (tacticians anxiously looking around, trimmers taking the slack out of the lazy sheet, bowmen moving forward), try to jibe before them. If you're the first to jibe, you'll usually have a great lane away from the pack and into the mark, and leading the group on the long tack is a powerful position. If you're late to jibe and others go first, you may want to wait longer for a clear lane, as long as you have some time left before the layline.

The type of boat you're sailing will influence your decision. If you're on a boat with an asymmetric spinnaker, you'll always be reaching downwind. If your boat has a symmetric kite, you can sail deeper by squaring the pole, especially when the breeze is strong. If you can sail deep, it's more critical to get on the long tack as soon as possible. The zone between the laylines is narrow, and a moderate shift can place you on or outside the laylines if you stray to the edges too early on the run. It's less critical with an asymmetric spinnaker because, with the wider jibe angles, it will take longer to get to the laylines.

If everyone is sailing wide jibing angles (asymmetric kites, or symmetric kites in light air) it's easier for a boat behind to "jump you" (jibe when you jibe) and steal your wind. Because one of your primary goals is to keep an open lane for clear air and speed, it's important to set up yourself to jibe away and not be covered. You can do so by working low on the boat behind, into the ahead-and-to-leeward position. Watch a good match-race team defend its lead: they'll position themselves in the ahead-and-to-leeward position, and from there they can "match" jibes and keep clear air. It's often OK to briefly go slightly slower and lower to get into this position on the boat behind to ensure you can jibe away with clear air. If you can work low and go the same speed or faster, life is good, but always keep in mind your goal is to be able to jibe and keep clear air.

As you near the end of the run and boats start converging, it's important (just as it is at the top mark) to anticipate how everyone will come together. Envision the safest path through the traffic, and keep in mind starboard tack is powerful. Think about which way you want to go on the following leg and which gate you want to round. It goes without saying that it's best to set yourself up on the inside at the mark so you can have a nice rounding and a clear-lane upwind. We'll get to that in the next installment.

In summary, you want to sail the headed jibe downwind, in the most pressure while keeping a clear lane. Make sure to anticipate the moves of boats behind you and set yourself up to lead on the long tack with clear air. If you can execute all of those moves, you'll find yourself passing boats on the downwind legs.

Pro tips: Essentials of a Good Run

›› Clear air is a must

›› Sail the long tack downwind (the headed jibe, bow pointed to the mark)

›› Stay in the most wind available

›› Anticipate clean lanes, just as you would upwind

›› Lead away from packs

›› Ahead and to leeward of opponents is where you want to be

›› Watch your Windex or tell tales to determine bad air from other boats

›› Sail low if you want to jibe, protect high if you want to keep going

Part 7: Gain at the Gate

Having followed our advice of last month's installment in this Fundamentals series ("A Low-Risk Run"), you should be sailing downwind in clear air and on the headed jibe, approaching the leeward mark with a plan for the next leg. Now it's time to get around the leeward mark with minimal drama. As boats converge on the mark, traffic is inevitable, and it's here where you can make immediate gains or leave a lot of points on the table if you don't have a clean rounding. It's critical to make a few smart decisions before you hit traffic.

If the rounding is through a leeward gate, the decision-making process starts with selecting the gate mark that will allow you to execute your game plan for the next leg. As you approach the bottom of the run, ask yourself the following questions: Which side of the course is best for the next upwind leg? Which gate is closer? And what traffic issues, if any, will come into play?

The first two questions help you determine which gate is best in the absence of other boats. The third question considers how the presence of other boats will affect your ability to execute a nice rounding. Regardless of which gate is favored, it's often best to avoid congestion and go for the fastest rounding.

First, pick a side

During the run you should think about where you want to go after the rounding. I usually consider what happened on the previous beat and how the run is currently playing out, trying to identify the conditions of the day and which side will most likely pay. I stick to the basics, mostly identifying where the most wind is, and which tack will be the long tack after rounding. I also factor in any influential racecourse features.

Assuming the gate marks are square to the wind, round the mark that sends you the way you want to go. If you want to go left upwind, for example, you should round the right-hand gate (looking downwind), and, if you want to go right upwind, you should round the left-hand gate. If you're unsure which way to go on the next leg, round the best available gate based on which one is favored

(if they're not perfectly square) or has the least amount of traffic. Once you've rounded, look at your compass to figure out the lifted long tack, and get on it.

Determine the favored gate

As you get closer to the gates and they become easier to see, try to determine which one is upwind (closer to you), if they're not square to the wind. The gate marks are typically identical in size, so the closer mark will appear larger. For a second opinion, I ask someone on the crew to help me determine which one is closer. If they appear to be the same size, they are likely even.

Sometimes the race committee will set the gate marks before the start, and you can check any bias before the race, just as you would for the starting line. Go head-to-wind between the marks and note which one your bow points to. This is the favored gate.

If there's no traffic, you should round the upwind, favored gate. Rounding the upwind gate is actually a double bonus. A gate mark that is, for example, one boat length upwind of the other does not look massively different. But it's actually a two-boat length gain if you round it. Think about it: you're sailing downwind, even with another boat, and the two of you split gates. You observe and choose the bigger looking gate and your competitor splits to the other. As you begin to round your mark, your competitor must still sail one boat length downwind to get to his mark, and then he has to sail one boat length back upwind to get to the same spot.

If the upwind gate is the one you need to round to go the way you want upwind, it's perfect—a double gain. But if the gate you prefer tactically is the downwind gate, you have a tough decision to make: Can you round the upwind gate and then tack? Or, should you round the downwind gate to head to the side you want?

The answer lies in how much traffic is coming downwind, and whether tacks are costly in your boat. Here you have to weigh the advantages of the upwind gate versus the disadvantages of tacking and sailing through a wall of spinnakers. If your boat tacks efficiently, and the traffic is light, then round the upwind gate and tack. If traffic is really thick and/or the conditions are not conducive for tacking, go ahead and round the unfavored mark and sail straight, especially if you feel strongly about getting to that side. Remember, too, that you can also round the upwind gate and wait for all of the spinnakers to clear out then tack. The tactician must determine if getting to the favored side as fast as possible is worth sacrificing those two boat lengths.

We had a scenario much like this a few times at the recent Etchells Worlds in San Diego, where we wanted to go right on the second beat, but the right-hand gate (looking downwind) was closer to us as we approached (sending us left upwind). We decided to round the favored gate and wait for a good lane to tack after the spinnakers, then head right. Our bias toward the right side was more of a hunch than a must-get-right scenario. In more than one race we rounded the favored right mark, sailed straight for a minute until most of the spinnakers went by, then tacked to go right. In each case, our move worked out well. Often we found ourselves with a wide-open lane heading right, compared to those who rounded the left gate and were pinching in narrow lanes.

Part 8: Closing Strong

The second beat, and in this example, the final leg to the finish, is your opportunity to string together everything you've learned throughout the race and finish strong. Your top priorities should be to sail on the lifted tack, and stay in the most wind on the racecourse.

To quickly determine if you're on the lifted tack, check your compass after you round the leeward mark and compare your heading against the numbers you've seen throughout the race. If you're not on the lifted tack, look for a good lane and tack as soon as possible.

Once you're sailing on the lifted tack and aiming at the finish, you can relax a little, sail your own race, and start looking around for any other significant racecourse features, i.e., more wind or favorable current. You must also consider how satisfied you are with your position. Top sailors win regattas by having a series of low scores, or "keepers." If you are up in the front of the fleet, you want to keep it that way. The farther ahead you are the more you should minimize your risk by covering nearby boats.

If you are having a bad race, you may want to take a little more risk and focus solely on sailing the course as best you can given the available lanes. Let those ahead of you make mistakes.

If you're doing well, say top third, evaluate how you can pass boats ahead, and whether boats behind can pass you. Often, the front of the fleet is pretty spread out, so evaluate possible scenarios before making any decisions. For example, if you are leading the fleet out of the leeward mark, and the next eight boats tack and go the other way, tack and go with them.

We typically have varying levels of confidence in our tactical decisions, so you can factor that in, too. In theory, you should always sail the fastest route around the course in the absence of other boats. But what if you like the right, and everyone behind you goes left? Should you sail right by yourself? No way. If you're leading the group, position yourself to the right of them (since you like the right), and go left with them.

What if the next group goes right, forcing you to decide which group to stay with? The answer depends on how far back that second group is, and how favored the right is. At some point, if that second group starts gaining on the right, you can tack and go back right since you had confidence in that side to begin with. If the right side really is better, that group will now be closer. It's all about balancing what you think is right and not splitting too far from potential threats.

If you're trying to protect your lead, or your place in the fleet, the safest position you can put yourself is ahead and to windward of the competition. From this covering position, you are safe if the wind shifts either direction. In doing so you're putting your boat between the fleet and the finish line, minimizing risk as much as possible.

Let's say you are having a tough race and round the leeward mark 15th of 20 boats. Here it does not make sense to cover the few behind you because you need to pass boats. To do so, simply revert to the top two priorities: sail the lifted tack in the most wind available. By doing so you'll pick off anyone who does not follow those rules.

Many people think it's best to simply split from the group if they're behind, going for the "Hail Mary" pass. But if splitting means going the wrong way, it only puts you farther behind.

The better move is to play the wind correctly and patiently wait for others ahead of you to make mistakes. Mentally, it is tough to resist splitting, but you'll be better off focusing on doing the right thing.

Earlier, I said it's OK to take more risk, but what I'm talking about is calculated risk, meaning you take a little more leverage to the side you think is correct.

Let's say the right side of the racecourse was best on the first beat because there was more wind. On the final beat, when you are behind, instead of sailing a conservative 80 percent of the way to the right side, take more risk and sail 95 percent to the layline. You don't sail 100 percent of the way to the layline when behind because those ahead may tack on you and you want to leave some space for a clearing tack.

As you approach the finish line, you need to determine which end is favored, and do your best to finish at that end. On upwind finishes, the downwind end of the finish line is closer and favored. I figure out the favored end by pretending it's a starting line and comparing the angles of other boats to it to determine the favored end as if it were a start. Then I finish at the opposite, downwind, end. I do this because it's easy to figure out the favored end of a starting line by watching others sail across it, or by comparing my own angle to it. When the committee boat end is favored, boats sailing across the line on starboard look really "bow up," sailing almost perpendicular to the line.

When the line is square, boats sail across at a 45-degree angle on both tacks, and when the pin is favored, boats are sailing more parallel to the line pointing toward the pin. Port-tack boats crossing the line near the pin will look "bow up" with a pin-favored line, and they will look "bow down" if the committee boat is favored.

Another method is to look at the flags on the finish boat and use them to determine the downwind side of the finish line. The flags tend to point toward the favored end. The only downside with flags, however, is that they are hard to see from a distance, and turbulence from the race committee boat can affect their angle. I trust sailing angles most, but with either technique, you should pick the closer end and do your best to finish there.

If you happen to be bow to bow with a few boats at the finish, you can "shoot" the line to gain a few extra feet. Depending on how far your boat will glide in the given conditions, you can steer the boat directly toward the line, gliding across with speed and sailing less distance. Having called many tight finishes, the boats that time their glide will often save critical points.

In conclusion, stick to the basics of sailing upwind on your second beat while factoring in those boats around you. If you are happy, cover. If not, take a little more risk toward the favored side. When approaching the finish, figure out the favored end, and finish there.

Part 9: Ready for the Next

When you cross the finish line you're not done racing. Hold off on any debriefs. Instead, get right into cleaning up the boat and getting it ready for the next race (even if it is the last race of the day). If this

will be a new routine for you, make a checklist that includes things such as flaking the jib and bagging it, running the spinnaker tapes, coiling lines, and tuning the rig if you have any changes in mind. Once you've done all of this, only then can you make your way to the starting line and break out the food and water. Stay close to the race committee boat in case they fire off another race quickly.

Once everything is set to race and everyone is relaxed, you can have a quick debrief—focus on what needs to be improved for the next race, even if you finished first. If you had a bad race, figure out why and make a plan to improve it. If you had one obvious thing that went wrong, there is no need to over think the situation, understand what went wrong and move on.

To do well consistently, it's important to have an honest look at how you've just sailed and what paid on the racecourse. It's key to have an open mind: the tactician may blame boatspeed for bad results while the speed team (trimmers) may say tactics were to blame for a poor result. Either way, look at what is actually going on before you can address specific issues.

When reviewing your race, break it down into three simple categories: the start, your speed, and then your tactics—in that order. Did you get off the line? Were you going fast? Did you go the right way and make good decisions? Answering these three questions will shed a lot of light on your race. Usually, to finish in the front you have to do well in all three categories. If you're lacking in one of the areas, but do well in the others, you can still pull off a good finish, but your goal should be to nail all three.

An effective post-race debrief might start off with something like this: "We had a bad start and got forced right, the left paid and we got behind. Our speed seemed fine so if we can get off the line we will be OK. What do we need to do to improve our next start?"

Or it may sound like this: "Our start and speed seemed OK; we just missed a few shifts. We need to do a better job of playing the shifts."

Debriefing in this logical, and factual approach helps get to the bottom of what needs to be addressed, and can help you think about the racecourse for the upcoming race as well.

Let's assume you have "issues" that need to be dealt with. If you had a bad start, figure out what you have to do to start near the favored end in an open space. Think about your final approach and how and when you need to accelerate. Practicing a few starts, with timed runs, and doing more line research can help improve for the next one.

If you had tactical issues, determine whether you were sailing in the most wind available on the course. Make sure you know which is the long tack—is your bow aiming at the mark most of the time? Evaluate whether there were any other racecourse features such as current or a geographic shift that you missed. How was your lane management: did you keep the boat in clear air as much as possible?

And finally, talk speed. You must be fast to do well in sailboat races—there's no disputing that fact. And speed can be the most illusive of the big three. If you have speed, you can make a few tactical mistakes and still be just fine. Without speed you have to be perfect in all other areas and you still might not do well. When addressing speed issues you should quickly discuss how the helmsman is driving, how the sails are being trimmed, and whether the rig tune is correct for the conditions. If the wind changed velocity and you got caught out of tune, or you were not going well upwind, adjust the rig and make sure you note how many turns you made—if it ends up being an improvement you can

add it to your tuning guide. The simplest way to quickly improve is to copy those faster than you. Don't be afraid to ask the fast guys what they are doing and then imitate their settings or technique.

Once you've tackled these three elements you can get right into the mechanics of your first race pre-start routine. While the race committee gets ready, use that time to do wind shots and short sails upwind. This will help you stay in the game and not lose track of the wind patterns while also helping your speed. Check the current, if necessary, and then get your starting line sights and laylines. The key is to stay active and do plenty of research, improving your chances of success. Before you know it you'll be rolling right into the next race and as ready as anyone else on the water.