

BRAIN TEASER

What does this mean?



At four minutes before your start, the RC hoists the 2 flags shown here. If you are on the course side of the starting line at your starting signal, you:

- A) can exonerate yourself completely by sailing around either end and restarting;
- B) don't have to re-start but you will get a 20% penalty added to your score;
- C) must sail around either end, plus you will get a 20% penalty. (See page 10)

STARTING A Micro View

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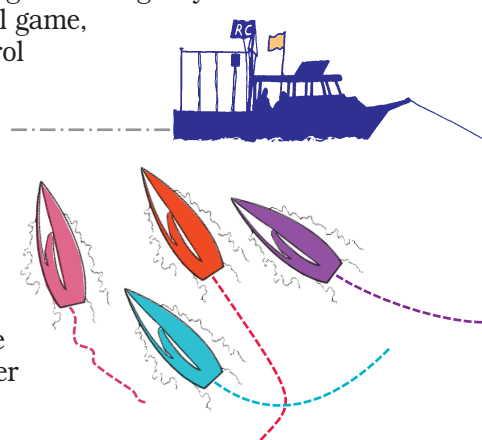
Fight for control at the start!

In the last issue we talked about starting strategy – the plan you make for where to go on the starting line. You can develop the greatest strategy in the world, but if you don't have the ability to implement that plan, it won't help you much at all. That's where tactics come into play.

The starting line is the most crowded part of any race course. For this reason, it's a place where you need smart starting tactics – those boat-on-boat maneuvers you use to control other boats and hold yourself in position on the line. Without sound tactics you will ping-pong around the fleet, and your chances of getting a good start are slim.

As soon as you decide on a starting strategy, you should start thinking about tactics. In other words, how can you implement your gameplan in the midst of a crowd of boats? For example, if you want to continue on starboard tack after the start, you better set yourself up on the line with a good hole to leeward; otherwise you'll fall into bad air, be forced to tack and find yourself heading the wrong way.

To succeed at the tactical game, the key is being able to control both your own boat and the boats around you. On a busy starting line, control comes primarily from three factors: good boathandling skills, an understanding of the applicable racing rules, and a repertoire of good tactical moves. All three are discussed in much greater detail inside this issue. •



JH Peterson photo



Work on your starting position

The goal of your starting tactics is simple – it's to get yourself into a good position when the race starts. A 'good position' is one that allows you to do two main things: 1) Come off the starting line in the front row with speed and clear air; 2) Follow your strategy for the first windward leg.

Tactically, your position at the start must consider two factors – the location of the fleet as a whole (see discussion of 'clumps' below) and the actions of the boats that are right near you. Both of these will impact your ability to position yourself for a good start. For example, if you start in the middle of a huge pack of boats it may be difficult to get off the line cleanly. Or if there's another boat close on your lee bow at the start, you will soon get pinched off.

One of the keys to positioning at the start is the ability to handle your boat well in close quarters. In a dinghy you must be able to hold your boat in place for quite a long time, turn your boat without mov-

ing forward and accelerate from zero to full speed in as short a time as possible. In big boats, you need a good sense of time and distance.

Many of these boathandling skills are things you and your crew can practice on your own. Find a buoy, for example, and see how long you can hold your boat in position right next to it. Then sail away from the buoy, start a countdown, and try to reach the buoy at full speed when your watch hits zero. Good boathandling requires teamwork and a fair bit of practice.

As I mentioned before, knowledge of the racing rules is also key to the execution of starting tactics. Tactics, by definition, involve boat-to-boat maneuvers, and it's difficult to be confident about these if you don't fully understand your rights and obligations under the rules.

Fortunately, the rules are one sailing subject that you can learn without having to be on the water all the time. Set a goal for this winter of learning all the rules that apply at the starting line. Study the

rulebook, read books about the rules (I recommend Dave Perry's *Understanding the Racing Rules of Sailing Through 2008*) and find chances to talk with people who know a lot about the rules.

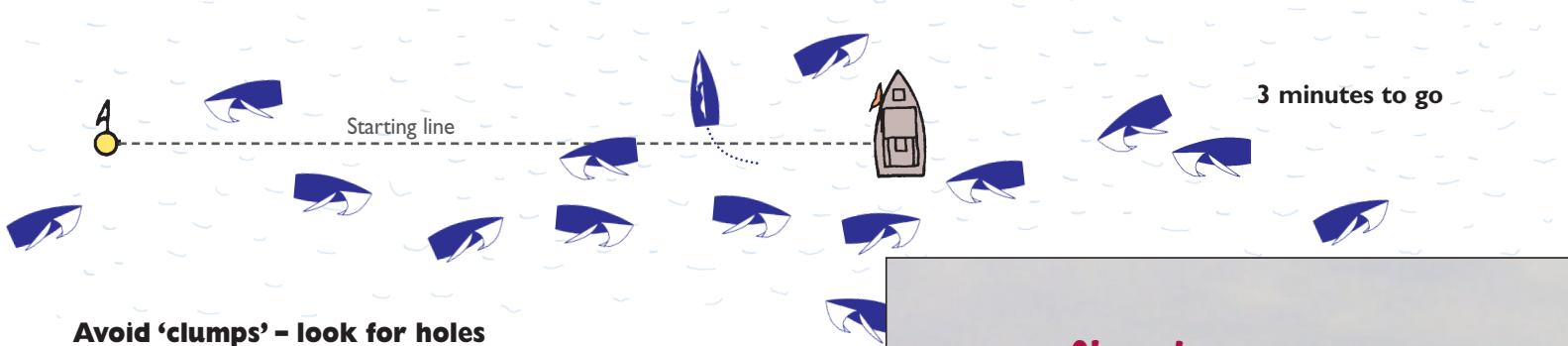
Besides smooth boathandling skills and a thorough understanding of the rules, getting yourself into a good position at the start requires the ability to execute some basic tactical moves. Here are a few rules of thumb when you are approaching the start:

• **Line up on starboard tack.**

We take this for granted because almost everyone does it. But there is a very solid tactical reason here – boats on starboard tack have the right of way. Yes, there are times when a port tack start will work (be sure to look for those), but most of the time it's better to go with the flow by making your final approach on starboard.

• **Luff on a closehauled course.**

When you are sitting on the line, luffing and going slowly, keep your boat on an angle that is about 40°



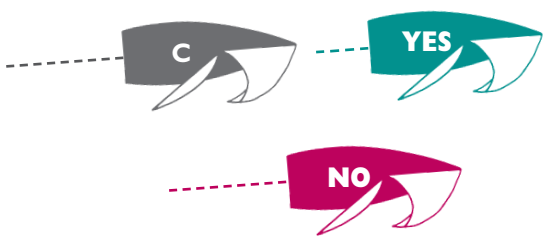
Avoid 'clumps' – look for holes

Almost every starting line is like a piece of Swiss cheese. It has holes where there aren't many boats and clumps where the boats are packed tightly together. There are usually clumps at the ends of the line, and almost always at the 'favored' end. Sometimes there are clumps, or holes, where you least expect them.

You don't have to be a cheese connoisseur to realize that the odds of getting off the line in good shape are better if you start in a hole than a clump. In a clump it's hard to create space to leeward and find a lane of clear air; in holes it's much easier to come off the line with full speed.

Because of all this, look at your starting line and try to predict where there may be clumps and holes. In the starting situation above, it looks like the committee boat will be much more crowded. In the photo at right, there's a nice hole in the middle of the line. Unless you need to start in a certain spot, seek out the holes. Watch the pre-start flow and be flexible to change your plan if it looks like you're headed for a clump.





Keep your options open

When you're making a port-tack approach, don't let yourself get pinned by other boats. If you're not careful, another port tacker to windward (C) will prevent you from tacking and force you farther down the line than you want. To avoid this, slow down or speed up so you maintain the option to tack or jibe whenever you want. If you get desperate, you can always head up to closehauled and use rule 19 to hail for room to tack at a starboard-tacker obstruction.

or 45° to the wind. This way you can trim in and start accelerating without the need to turn your boat or your rudder (both of which take time and slow you down).

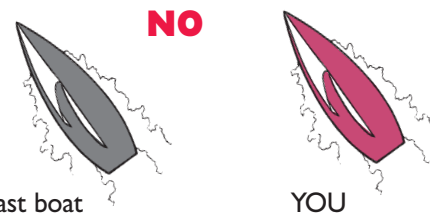
- **Avoid boats close to leeward.**

You should never start a race with a boat close to leeward (if you can possibly avoid it), so carve out a hole on your leeward side and guard it as you approach the line. The size of the hole you need is at least half a boatlength or so, but depends on a number of factors including wind strength, waves, line angle and your type of boat.

- **Start with your bow even.**

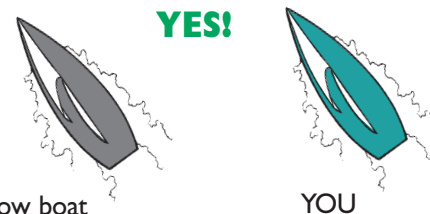
Unless you know the boats around you are over the line early, you should always start the race with your bow even or ahead of theirs. The most common error here is not accelerating until it's too late, so keep an eye on the boats nearby and be ready to trim in when they do.

From a tactical point of view, it's important to anticipate what may happen and to be flexible about how you respond. If you're stuck in a pack with 45 seconds to go, for example, don't be afraid to bail out and find another hole. On these pages are some more tips about starting tactics. •



Set up above a 'marshmallow'

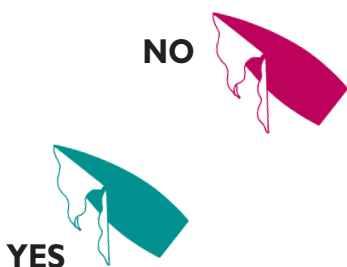
In terms of positioning, the boat on your leeward side at the start may be the most important factor of all. If this boat is too close, too fast or points too high, you will have a very hard time staying in the front row after the start. So don't leave this variable to chance. Pick a slower boat and set up just to windward of them. This will give you a much better chance of having a good start (and race) than starting next to your fleet champion.



Starting line

Don't set up too close to the line

A common mistake, often made by racers who are less experienced, is getting to the line too soon. You definitely want to be near the line at the start, but if you're too close before the gun the only way you can build speed is by sailing on a close or beam reach. This is not good because it uses up your hole to leeward and takes you toward boats (to leeward and ahead) that have the right of way. Instead, hang back far enough from the line so you will have room to trim in on a closehauled course and accelerate to full speed by the time you reach the starting line.



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Create and protect a 'hole' at the start



The reliable port-tack approach

No matter where on the line you're planning to start or what type of boat you're sailing, a port-tack approach usually works pretty well. This method allows you to see all the starboard tackers as they start to set up on the line, and you can pick a good place for tacking into the starboard line-up.

There are typically two places where you might tack:

- 1) Above or below another boat; or
- 2) Between two boats.

Here are some comments about each.



Setting up near one boat

This may sound backwards, but I usually set up on the *windward* side of a boat that's already luffing near the line. I know that I will almost always end up with a boat to leeward of me at the start, so by tacking into this position I maintain some control over which boat is to leeward of me and how big a gap is between us. Of course, I look for a slow boat here and create a gap that is only as big as I can realistically defend.



Setting up between two boats

When you are making a port-tack approach and the line is starting to get crowded, look for two luffing starboard tackers with a decent hole between them. In this situation, tack so you end up on the windward (right) side of the hole, just to leeward of the boat there (D). This gives you the largest possible hole to leeward (between you and C) with good control over the windward boat, D (see right).

When the starting signal goes off, every boat should have a nice hole to leeward. This allows you to accelerate off the line, sail your boat fast in the conditions and avoid getting pinched off or slowing in bad air.

In order to start with a good space to leeward, your main tactical goal during the last few minutes before the start should be to carve out and then guard a hole on the line. This is not so easy to do, especially at a crowded start. It requires good boathandling skills, rules knowledge and a number of differ-

ent tactical moves depending on the wind strength, waves and the type of boat you're racing.

In a dinghy, for example, you may need to sit in one place on the line for the last two minutes. Heavy boats are always moving, they set up farther away from the line and require a timed approach.

• Reserve your spot early.

It's usually better to set up a little too early than too late, especially with dinghies and in lighter air. If you wait too long on a crowded line, the front row will fill up and you may never have a chance to



JH Peterson photo

Tacking underneath another boat

When you tack underneath a starboard tacker on the starting line, you usually want to end up quite close to leeward of them. This prevents them from bearing off behind you and allows you to control them by luffing.

It's not always easy to get close under the other boat, especially if they bear off at you to "close the door." To prevent this, make your initial approach as if you are going to keep sailing past them on port tack. When you are almost astern of them and they have let down their guard, make a quick tack so you end up to leeward of them.

If the other boat does bear off at you, begin your tack early so you don't foul them. As soon as you begin to tack, the other boat usually heads back up to close-hauled. Instead of making a normal tack, hold your boat head to wind so you glide up right underneath them and burn off your speed.



create any space for yourself.

- **Shift right in your hole.**

Always keep working to the right in your hole, toward the boat on your windward side. This gives you more control over that boat and increases your space to leeward.

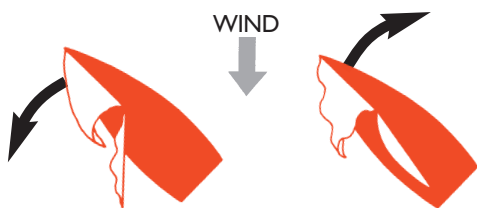
- **Don't allow other boats to sail into your hole.** Post a "Do not enter" sign around your space by aggressively defending it using the tactical moves described at right.

- **Save your hole as long as you can.** There are times when you must use up a little of your hole to keep other boats out. But otherwise save it until the start. If you trim too soon before the gun, for example, you will accelerate too early and wind up just to windward of the boat on your leeward side.



Don't be a line hog

When you're setting up for the start, don't be greedy. You can only guard so much space, and having too big of a hole will attract other boats. Therefore, take only as much space as you really need – perhaps a boatlength. If another boat can easily sail between you and the boat to leeward (C), you probably have too big a hole. As you get close to the start and boats no longer threaten your hole, try to make it a little bigger.



Use your sails to rotate

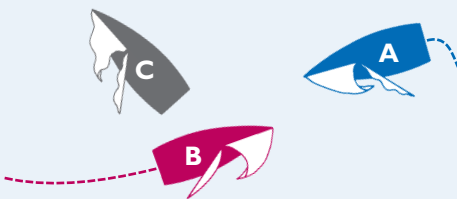
When you're luffing before the start, you often need to turn your boat sharply to defend your hole against other boats. Since you are going slowly and you don't want to move forward very far, you can't rely on your rudder for turning. Instead, you must use your sails to rotate. When you want to bear off, overtrim your jib and undertrim your main. When you need to head up, do the opposite. With this technique, you can almost spin your boat in place without moving forward.

Defend your spot on the starting line

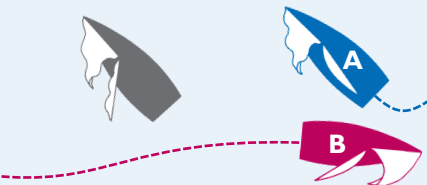
From a port tacker



1. When you (A) are lined up for the start and you're protecting a hole to leeward, beware of port tackers (B) coming from your leeward side. These latecomers are looking for a space where they can tack, and you definitely don't want them filling up the hole to leeward. Keep a good lookout and use the moves below to discourage them.



2. When you see a port tacker eyeing your hole, rotate your boat so you are aimed right at them. This will make it much harder for the port boat to tack into the hole on your leeward side. Try to rotate your boat without moving forward. If you go forward too much you will use up the hole you've been protecting and end up just to windward of the leeward boat (C). Since you're probably not moving through the water very fast, you can't turn with the rudder or by moving your weight. Instead, rotate by over-trimming your jib (or genoa) and letting your main out.

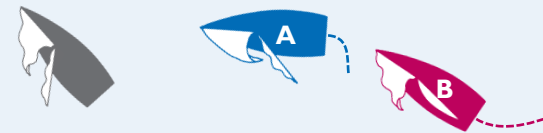


3. Your goal is to discourage the other boat from tacking into your hole and encourage them to keep sailing past your stern in search of a better space. As soon as the port tacker commits to passing astern of you, use your sails (trim main, ease jib) to rotate your boat back up to a closehauled course (or above) so you maintain as much of your hole as possible.

From a starboard tacker



1. Another threat to your leeward hole are starboard tackers (B) who can't find a spot on the line and start reaching along behind the front-row lineup, looking for a hole. It's harder to see these boats coming, so keep an eye over your shoulder. Use the moves below to guard your space and avoid getting luffed head to wind.



2. When a starboard tacker comes from behind and threatens to sail into your hole (and probably luff you in the process), discourage this by turning your boat to a reaching course, as if you are going to sail into your hole. Turn your boat with your sails and try not to move forward any farther than necessary (so you don't use up your hole). Push your boom out to take up more of your space. Try to make the other boat think there will be a better hole to windward of you than to leeward.



3. As soon as the starboard tacker turns and commits to going on your windward side, rotate quickly (using your sails) and luff them toward the wind. This accomplishes two things: 1) It gives you control over the windward boat, which will be helpful when you come off the line; and 2) It moves you as far as possible from the boat on your leeward side (C).

Instead of turning up to windward of you, it's possible the starboard tackler may continue past on your leeward side. As soon as she commits to going behind the boat to leeward of you (C), head up and maintain your hole.



Help your team get a good start

In sailboat racing, the helmsperson holds the wheel or tiller, but the entire team is responsible for the boat's success (or failure!). This is especially true at starts, where there's usually too much going on for one person alone to process efficiently. That's why every member of your crew needs to pitch in during the starting sequence. Here are some things you can do to help your boat have a successful start:

Read the sailing instructions very carefully before the regatta starts. It's amazing how many skippers (and other crewmembers) either don't read the SIs at all or don't remember much of what they read. Even if your teammates have read the SIs, it's always good to have one more knowledgeable person aboard when the race committee starts putting up strange signals.

If it's the last race or the last day of a series, **write down the scores** and bring them out with you. This info could be critical during and after the start if the standings are close between you and other boats.

Keep a lookout for other boats coming toward you and make sure the helmsperson knows about these, even if they appear to be obvious and even if you have the right of way over them. Be specific. Don't just say, "Watch out for that boat." Say "Do you see the red boat coming on starboard tack?" Focus on areas where the helmsperson has a hard time seeing, like behind his or her back and underneath the genoa.

Use your weight and sails to steer the boat as much as possible. Turning the rudder is slow and does not work so well in downspeed situations before the start. In light air, concentrate on moving your weight from side to side to facilitate turning. In heavy air (and when your speed is so slow that weight movement won't help), focus on the trim of your jib and mainsail to turn the boat.

Always trim your sails for full speed unless your helmsperson tells you to luff or slow down. If you're a sail trimmer, this requires constant attention because the boat's sailing angle is always changing as you maneuver around boats in the starting area.

If you're the boat's timekeeper, **give a loud and clear countdown** of the time remaining until the start. I recommend calling out every 15 seconds from 5 minutes to 2; every 10 seconds from 2 minutes until one; every five seconds from one minute until 20 seconds; and then every second until the start. In addition, I like to get a countdown to the prep signal (in case anyone wants to start their watch) and to the one-minute signal (especially when the I flag, Z flag or black flag rules are in effect). Make sure there is at least one other person on your boat who gets the correct time on a countdown watch.

When you approach the starting line and you know you are going to be early, the most common reaction is to luff your sails and slow down. But this has several disadvantages. First, it takes time for your boat to slow down, especially if it's a heavy boat. Second, once you slow down you have to get going again, and that also takes time. If you have a little room around you, you can avoid these problems by telling your skipper



On a bigger boat, the bow person usually plays an important role during the start. If you are doing this job, your first responsibility is to make sure the helmsperson doesn't run into anything. Shout a warning about converging boats, even if you have the right of way, and make sure the skipper acknowledges your hails. When following closely behind another boat, make signals to indicate whether or not you can turn and clear their stern. Thumbs-up usually means you can. During your final approach to the start, signal your distance from the line. The number of fingers you hold up typically corresponds to boatlengths from the line (on a close-hauled course). If you think you're going to be late for the start, use hand signals to tell the skipper to speed up.

JH Peterson photo



Back the jib to stay in control

When you're luffing on the starting line, it's easy to slow down too much and lose steerageway. A common result is ending up stuck "in irons." The best way to prevent this is by luffing on a closehauled course (instead of head to wind or nearly so), but there are times when this is difficult to do (like when a leeward boat is luffing you). That's why you need a backup technique for staying out of irons.

When your boat is going very slowly before the start, your skipper loses the ability to turn it with the rudder (since there is no water flowing over your foils). In these conditions, the best (and just about the only) way to turn your boat is by backing your jib. It's easy to move the jib from side to side with the sheet or your arm, and since the jib is well forward it has a large effect on where the bow goes.

While you are luffing before the start, hold one jib sheet in each hand and be ready to trim hard to back the sail. On the starting line you almost always want to turn onto starboard tack, which means you should back the jib to the starboard side. On some boats, pulling hard on the sheet will fill the jib enough to turn the boat efficiently. At other times you may need to grab the clew of your jib and hold it far out and down to turn the boat more quickly.

It's easy to practice this when you're not racing, and it may well be worth the effort if you can save your team from an embarrassing stay in irons while the rest of the fleet starts the race and sails away.

to **wiggle instead of luff**. He or she should turn the rudder boat back and forth so you kill time by sailing a longer course. The effect is immediate, and if you do this gently you will maintain most of your speed.

Make sure someone on your team will **keep track of the race committee signals**. For example: How long will it be before your warning signal? Is there a starting penalty in effect? What course are you sailing this race? What is the compass bearing and distance to the first mark? Ideally, this should be someone who knows (and brings along a copy of) the sailing instructions.

When your helmsperson checks the wind direction in the starting area, make sure he or she does it by **going head to wind on starboard tack**. That way you will stay on starboard (as long as you don't go past head to wind) and therefore maintain the right of way over all nearby boats. It's also a good idea to take every wind reading from the same tack so these will be consistent.

Remind the helmsperson about your strategic plan for the start and the first beat, and keep one eye on the course for anything that might change this. The helmsperson will often have his or her head "in the boat" during the final few minutes before the start, so this is a good time to look around and keep him or her on track with your gameplan.

When you are making your final approach to the line (which means you are probably luffing on starboard

tack), **keep a good lookout** for port tackers to leeward and starboard tackers astern who might try to take your hole to leeward. Be sure to warn your helmsperson far enough in advance so he or she can take action to defend your real estate.

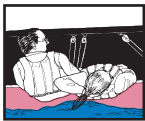
These are just a few of the things that any crewmember can do right away to help their team be more successful at the start. Your situation is always changing before the start, especially with regard to tactics, so it's important to recognize changes and quickly figure out how to deal with them. For this job, two (or more) heads are usually better than one. •

'Learn The Racing Rules'

A two-part DVD set that explains the current Racing Rules of Sailing.

No matter what your level of racing, you will benefit by watching this DVD! Part 1 covers all the major right-of-way rules and their basic limitations. Part 2 is all about rules at marks and obstructions. Both are one hour long with extensive use of live demonstrations, racing footage, computer graphics and the text of all rules covered. Written and narrated by David Dellenbaugh. Speed & Smarts subscribers get a 10% discount! For more info and to order:

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TECHNIQUE

How to get the start you want

In the last issue, we discussed different areas of the starting line and when you might want to start in each one. For example, you would probably start near the committee boat if that end was much farther upwind, if the right side of the course was favored, or if the first beat was short and you wanted the starboard-tack advantage.

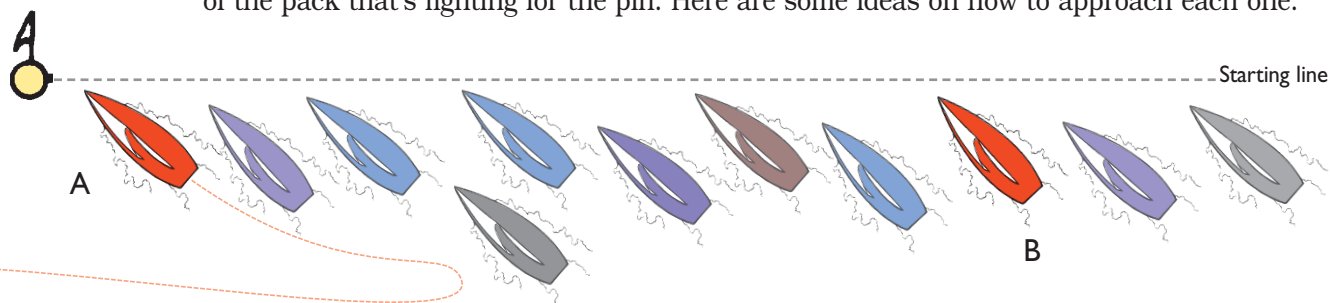
Once you've decided *where* you want to be on the starting line strategically, you must figure out *how* to get a good start there amidst a fleet of boats. Coming off the line with speed, clear air and the option to go where you want requires good starting-line tactics. That is the subject of this issue in general and these two pages in particular.



JH Peterson photo



Starting at the pin (port) end – When you've decided to start near the pin end of the line, there are two basic approaches you can make. One is to go for all the glory (A) and be the boat at the pin end starting mark when the gun goes off. A second, more conservative approach (my preference) is to slide a little way up the line (B) so you are just to windward of the pack that's fighting for the pin. Here are some ideas on how to approach each one.



BOAT A

- This is a risky place to start so you should go here only when you are willing to assume a certain level of risk at the beginning of the race.

- The best approach for starting at the pin is to be the last boat making a port-tack approach. This way you can see where the rest of the fleet sets up, and you can tack in front of the boat that is closest to the pin end (assuming they aren't too early).

- When you make your final port-tack approach, aim your bow a boatlength or two below the starboard-tack lineup. As you tack in front of the first boat, you want to end up close underneath them with your bow slightly behind theirs and a boatlength or two from the starting line. This prevents the other boat from ducking below you and gives you room to accelerate at the start.

- Be careful about using up the space between you and the pin too soon. Aim to start at least one boatlength away from the pin, if possible, so you won't hit it or have to pinch up around it.

- If you have a chance to tack and cross the fleet soon after the start, that is probably a good, conservative move to consolidate your position.

- If you started here because the left side is favored a lot, don't go into pinch mode after the start – sail fast toward the left.

BOAT B

- You might start here when the pin end is favored and you don't want to risk getting caught in the big pack of boats right at that end. Sometimes there is a nice spot just to windward of the pin clump.

- You also might start here when the pin is favored but you like the middle or right side of the first beat.

- In either case, it may be difficult to continue very long on starboard tack with such a pin-end favor.

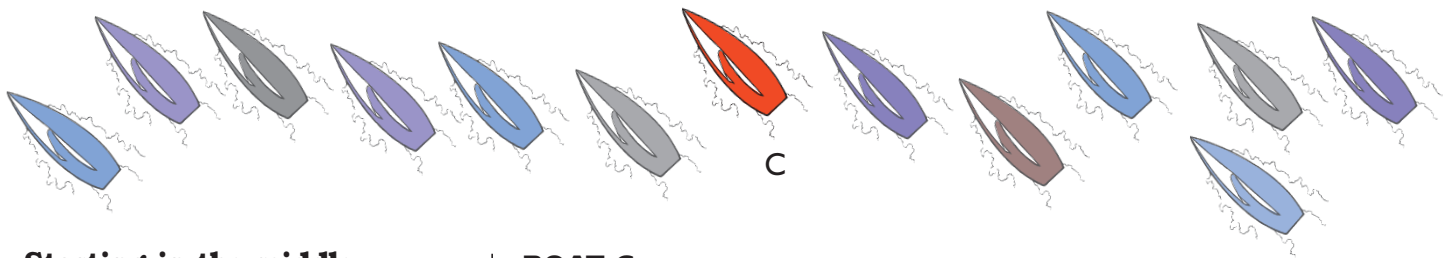
Therefore, having the option to tack after the start will likely be more important than being able to continue for a long time on starboard tack. Tacking will be especially key if you can cross the fleet to the right of you.

- Set up your starting position so you will create an option to tack soon after the start. Your goal is to be able to tack before the pin-end boats tack and cross you.

- As you approach the line, focus on the boat just to windward: Work up close underneath them, keep your bow ahead, accelerate promptly and go right into 'point mode' so you can pinch them off quickly.

- Make sure you have a line sight (transit) so you can get as close to the line as possible at the gun.

Starting line



Starting in the middle –

When you decide to start in the middle of the line you have one basic option (C). You can slide a little toward one end or the other, and you can make your approach from port tack or starboard. But most likely you will have competitors on both sides of you and no complications from either end of the line. If you're lucky you may find a spot that's not too crowded, but since you are as far as possible from either end, it will be harder to know where the starting line is.

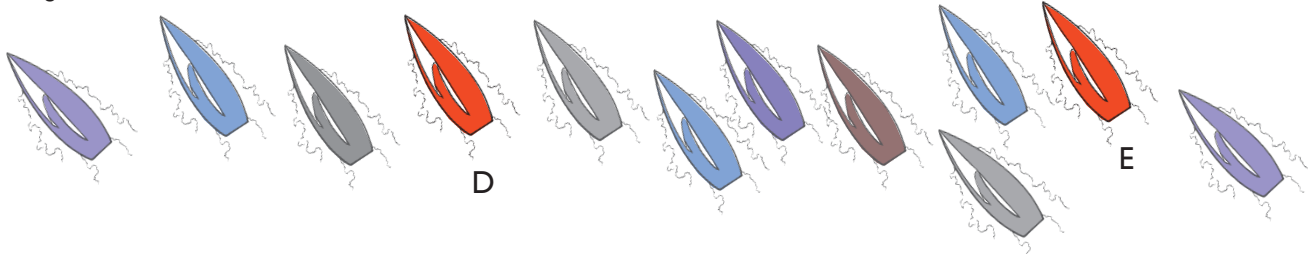
BOAT C

- When you start in the middle of the line, you absolutely must have a good line sight (if it's possible to get one). This will help you start confidently ahead of the usual mid-line sag.
 - Get two line transits – one right along the line and one from below the RC boat. The second one is key because you won't be able to see your actual line transit while you are luffing below the line before the start.
 - If there is a mid-line sag, hold back in it as you approach the start. Then trim in when you have just enough time to accelerate so you are at full speed on the line at the gun. This will maximize your advantage on other boats.
 - When starting in the middle, you will probably have to continue on starboard tack for a while after the start (since it will be difficult to tack and cross the boats to windward, at least for some time).
 - Therefore, a major focus of your pre-start tactics should be the boat on your leeward side. Look for a slower boat, set up to windward of them, maintain a sufficient gap between boats, and try to accelerate off the line before they do.

Starting at the boat (starboard) end – Like the pin end, you have two basic options here. You can go for the start (E) at the stern of the committee boat. Or if you'd like to improve your chances of success, you can shift down the line a little (D) until you are just underneath the pack that's fighting for this end.



Starting line

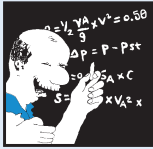


BOAT D

- Sometimes there is a nice spot here – about 1/4 of the way down the line, just to leeward of the boat-end clump.
 - You might start here when the committee boat is favored but you like the middle or left side of the course. In this case, it's absolutely critical to be able to continue on starboard tack after the start because it will be a long time before you can tack and cross the boats to windward of you.
 - Set up just above a slow boat (if possible) with enough of a gap between you and them. This may be difficult to do when the boat end is favored and the line is crowded. However, due to the line bias you should be able to start almost bow-even with the boat to leeward; so you won't need quite as big a gap in order to "live" to windward of them.
 - Keep your bow at least even with the boat to windward so they won't roll you. Unless you're worried about the line, accelerate no later than the boats on either side of you.
 - A line sight (transit) through the pin end may be helpful if there is a mid-line sag (this transit should be easy to see because you're on the windward side of the sag).

BOAT E

- This can be a risky adventure, so don't start here unless you are willing to take a chance at the beginning of the race.
 - If you're sailing a dinghy, the best approach for starting right at the RC boat is to get there early. Boats often sit at the stern of the RC boat for two minutes or longer before the start. If you arrive later than this, you might never break through the picket fence of front-row boats.
 - The best way to get into this spot is by approaching on starboard tack from outside the RC boat. In a small fleet, or if you get there really early, you may be able to approach on port and tack into this position.
 - Aggressively trim your sails to hold your boat in position.
 - If you're sailing a keelboat, set up in a spot (somewhere near the starboard-tack layline to the stern of the RC boat) where you can trim in on a closehauled course and get to full speed just when you hit the line at the RC boat.
 - Don't worry so much about having a big hole to leeward. As long as you get off the line in the front row you will soon have the option of tacking to get clear air if necessary.

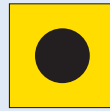


TEASER ANSWER (from page 1)

The correct answer is "C) must sail around either end, plus you get a 20% penalty." Rule 26 (Starting Races) describes the signals



Flag Z



Flag I

that a race committee uses during the start. One of the options listed for the preparatory signal (usually at four minutes) is flag Z with flag I (see right). When Z and I are both displayed, it means that both rule 30.1 (I Flag Rule) and rule 30.2 (Z Flag Rule) are in effect for that start. Therefore, if a boat is on the course side of the line at any time during the minute before her start:

- a) she must sail around one of the ends (i.e. across an extension to the pre-start side) before starting; and
- b) she will receive a 20% Scoring Penalty. This penalty applies even if the race is restarted, resailed or abandoned after the start.



LETTERS

Three good questions

Q Must a protestor complete the diagram portion of the protest form in order to have a valid protest? Put another way, does the failure to complete the diagram section invalidate the protest? — JD

Rule 61.2 describes what must be included in the contents of a protest. It says the protest shall be in writing and identify "the incident, including where and when it occurred." Submitting a diagram is one way for a protestor to identify an incident in writing. However, this could also be done with a written description of the incident. So a diagram is not required for a valid protest, as long as the written protest identifies the incident in some other way.

Q Our club uses fixed marks and colored placards to indicate the side on which each mark must be left. In a recent race with a downwind finish, the race committee boat was positioned on the port side of the mark (looking downwind), but the posted course said to leave the finish mark to port. Were we supposed to loop around the mark before finishing? — BH

The definition of Finish says that a boat finishes when she "crosses the finishing line from the course side . . ." Therefore, you should sail straight across the finish line without looping the mark. This is correct even if the sailing instructions or the race committee tell you to leave the finish mark on the other side. The reason is that sailing instructions cannot change any of the definitions. ISAF Case 45 is a very good reference for your question. It explains that a sailing instruction for finishing a race that conflicts with the definition Finish is invalid.

Q I often make a port-tack approach to the starting line, but sometimes I cannot tack without interfering with another port tacker to windward of me (either overlapped or not). As we approach the line of starboard tackers, can the windward port tack tacker instruct me not to tack? While the starboard boats are obvious obstructions, it's also possible for me to bear off behind them or jibe around to starboard. — GS

You do have the option to tack under certain circumstances. According to rule 20, you can hail a windward boat for room to tack when you approach an obstruction (e.g. any of the starboard-tack boats). Before you do this, however, you must head up to a closehauled course. Make sure you do this well before you encounter the starboard tackers since rule 20 says before tacking you must give the windward boat time to respond.

SPEED & Smarts

BACK ISSUES!

Almost all of the back issues of *Speed & Smarts* are still available. To see a list of TOPICS and prices or to place an order:

SpeedandSmarts.com/Order/BackIssues

David Dellenbaugh's **SPEED & Smarts**
The newsletter of how-to-tips for racing sailors March/April 2011

BRAIN TEASER
Can we do this?
Two boats overlapped on port tack enter the start of a windward mark that they must round to port. Can the windward boat (W) keep calling beyond the layline (and L) with her helm to starboard to round the mark?

Attack your speed problem.
Variables in without racing and because wind conditions change constantly, having consistently good speed is difficult to maintain. One factor that you can control is your boat's trim. It's important to hold a lane off the starting line. Difficult to look nearby tactically or strategically, learning to hold the correct trim and generally because there you could take steps to fix it. That's tough when the problem is persistent and you're sure what to do next.

ISSUE #116
A Case of 'the Slows'
THEME: Avoid a speed problem...1
TEASER: As a windward mark...1
IN THEORY: Speed never...2
STRATEGY: Tackles the slows...2
KEY CASE: Round the mark...3
TECHNIQUE: Two boats entering...10
TOOL BOX: Round the mark...12
RACE CORNER: Application...14
TEASER ANSWER...16
PRACTICAL TIPS: Easy thing...16

Get a case of 'the Slows'! Unfortunately being slow creates a downwind start. When you're off the pace you can't get on. You can't get on. When this happens, you need a plan to help you back out of the trap.

Speed & Smarts #116

David Dellenbaugh's **SPEED & Smarts**
The newsletter of how-to-tips for racing sailors No. 97 May/June 2007

BRAIN TEASER
Put 'money in the bank'?
On a big fleet race, you get to the startboard mark before the other boats. After sailing for a minute with your bow pointing at the windward mark, you started to get lifted, and now you are pointing about 10° above the mark. Should you keep sailing high of the mark, or bear off slightly to aim at the mark?

Go the 'right' way!
Tactics, as we discussed in the last issue, are best-on-board maneuvers you make as you sail around or to. You can use these maneuvers are designed to help you keep control of, or avoid being controlled by, your competitors.

Upwind Strategy
THEME: Go the right way...1
BRAIN TEASER: Above the layline...1
FOCUS: Make a gameplan...2
WIND DIAL: The wind dial...3
WIND VELOCITY: The wind velocity...4
COURSE GEOMETRY: The course geometry...6
CORNER: The corner...10
BRAIN TEASER ANSWER...11
IN THEORY: The layline...12
STRATEGY: Finish or abort...14
KEY CASE: Finish or abort...16
CREW WORK: Help with strategy...16

Speed & Smarts #97 www.SpeedandSmarts.com

David Dellenbaugh's **SPEED & Smarts**
The newsletter of how-to-tips for racing sailors No. 85 Nov/Dec 2004

Finish with a bang!
When you've got the finish line in your sights, W there are a couple of different paths you might choose. You could take a deep breath, relax and coast to the finish. Or you can resolve to push as hard as possible until the very end.

BRAIN TEASER
Which end is favored?
The lead leg of your race is a long one on the finish line. It's not exactly easy to start sailing windward, but there's a strong current running from left to right on the lead downwind leg.

Fast Finishes
THEME: Finish with a bang...1
BRAIN TEASER: Round the mark...1
IN THEORY: Pick the favored end...2
STRATEGY: Show the finish line...4
KEY CASE: Four boats at the finish...6
SUBJECT INDEX 1994-2004...7
TEASER ANSWER...11
RACE CORNER: Rules at the finish...12
PRACTICE: Don't other boats be the...14
CREW WORK: Post-race crew meeting...16

Speed & Smarts #85
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Barging – when rule 18 turns off

Rule 18 (Mark-Room) applies almost all the time when boats are inside the zone at a mark. But one time it does not apply is when boats are approaching either end of the starting line on their final approach to the start.

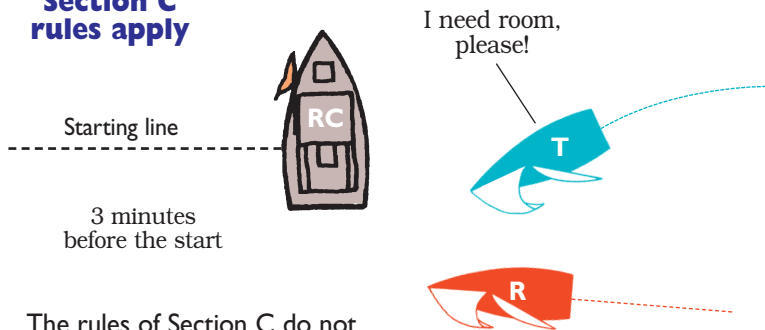
This is explained in the preamble to Section C (see box below), formerly known as the ‘Anti-Barging Rule.’ ‘Barging’ is how we describe boats that put themselves in a position where they are about to sail between a leeward boat and either end of the starting line (usually the RC boat).

Though the preamble makes barging very risky, it does not actually prohibit barging. It just says that in certain situations (like at the ends of the starting line when approaching the start), rule 18 does not apply. With rule 18 turned off, inside boats are not entitled to mark-room, so all boats must abide by the basic rules in Section A (Right of Way) and Section B (General Limitations) of the rulebook.

These rules say that a windward boat must keep clear, but they don’t permit a leeward boat to do whatever it wants to keep another boat from barging. Though the leeward boat has right of way, her actions are limited by many rules, including rule 14 (Avoiding Contact); rule 15 (Acquiring Right of Way); rule 16 (Changing Course) and rule 17 (On The Same Tack; Proper Course).

In any discussion of starting tactics, it’s critical to understand the basic rules about barging, especially when you are starting near an end of the line. That’s why we have devoted three pages of this issue to that subject. On this page is an explanation of when and where rule 18 turns off at the start. The next two pages contain an in-depth look at several barging situations and how the rules apply to each.

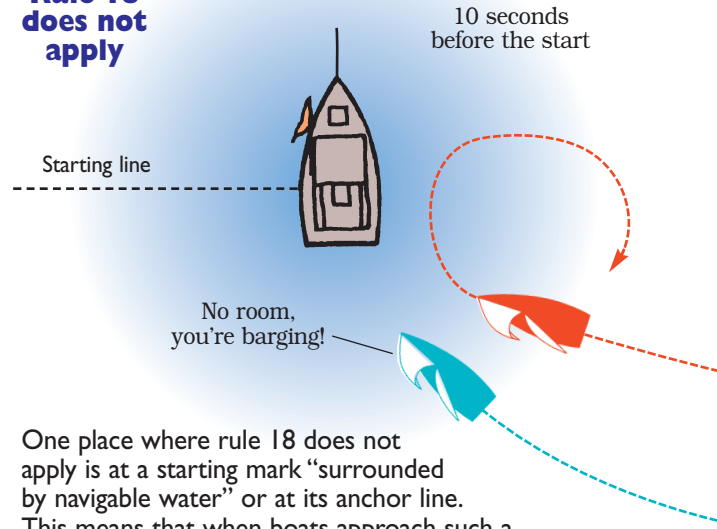
Section C rules apply



The rules of Section C do not usually apply when boats are approaching a starting mark to start. In the situation shown here, two overlapped boats are sailing toward the stern of the committee boat with three minutes remaining before their start. Since they are not on their final approach to the start, rule 19 (Room to Pass an Obstruction) does apply. If both boats are passing the obstruction on the same side, rule 19.2 says the outside boat (Red) must give room for the inside boat (Turquoise) to pass between her and the RC boat.

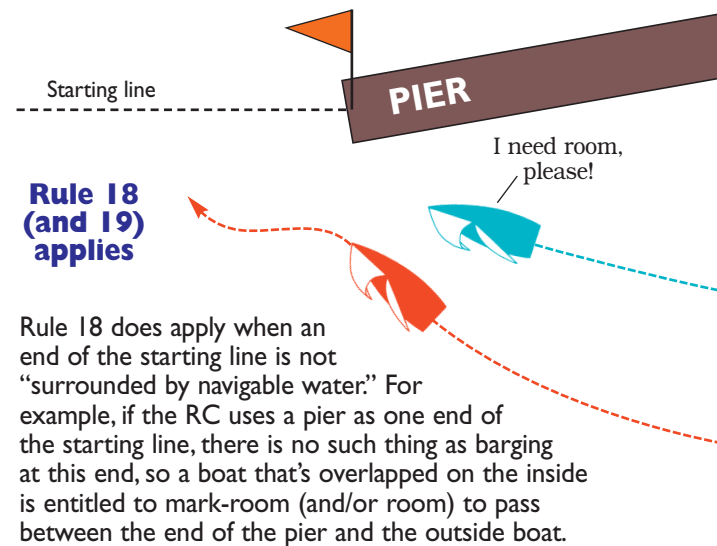
However, rule 18 does not apply here for a different reason; at three minutes before the start the committee boat does not have a required side (see the first part of rule 18.1). This doesn’t make much difference at the committee boat end of the line because it’s an obstruction and rule 19 applies as described above. However, if these boats were approaching the pin end (which is not usually an obstruction), the inside boat would not be entitled to room nor mark-room.

Rule 18 does not apply



One place where rule 18 does not apply is at a starting mark “surrounded by navigable water” or at its anchor line. This means that when boats approach such a mark to start, they are not entitled to ‘mark-room’ at that mark (or its anchor line). “Surrounded by navigable water” means that a boat could sail around the mark without hitting anything or running aground. This requirement is a safety precaution to give barging boats an escape route.

Rule 18 (and 19) applies



Rule 18 does apply when an end of the starting line is not “surrounded by navigable water.” For example, if the RC uses a pier as one end of the starting line, there is no such thing as barging at this end, so a boat that’s overlapped on the inside is entitled to mark-room (and/or room) to pass between the end of the pier and the outside boat.

SECTION C – At Marks and Obstructions

Section C rules do not apply at a starting mark surrounded by navigable water or at its anchor line from the time boats are approaching them to start until they have passed them.



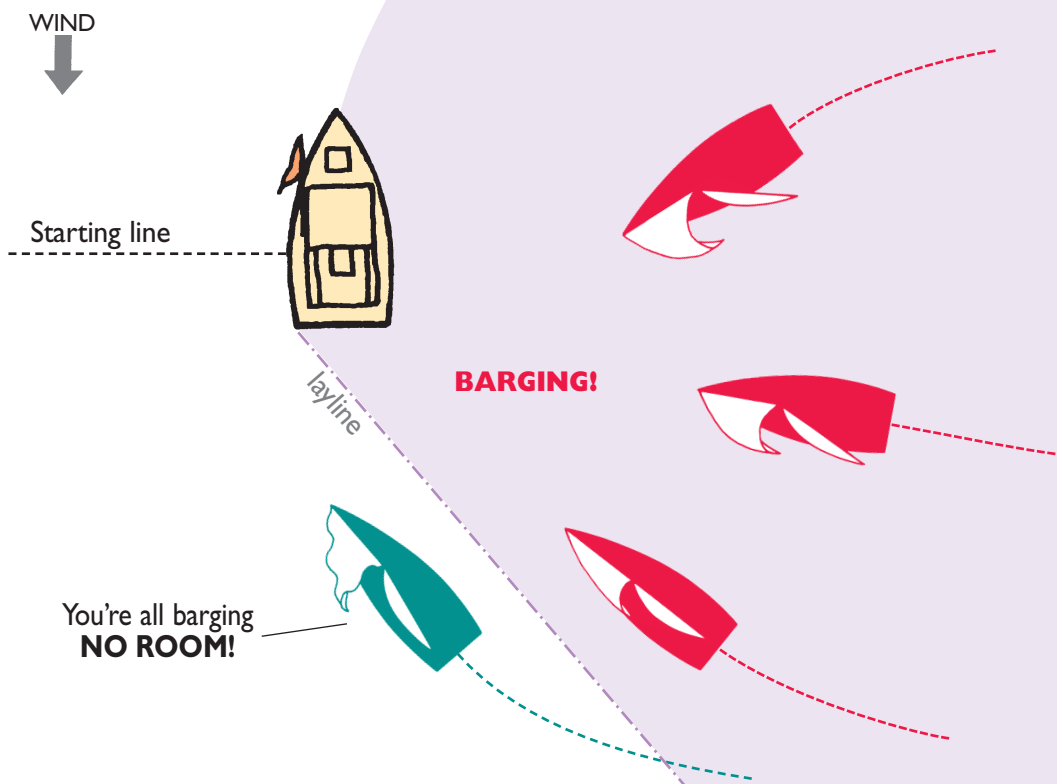
Barging – common applications

As I mentioned on the previous page, rule 18 does not actually contain an anti-barging provision. The preamble to Section C simply says the rule does not apply at certain times near starting marks.

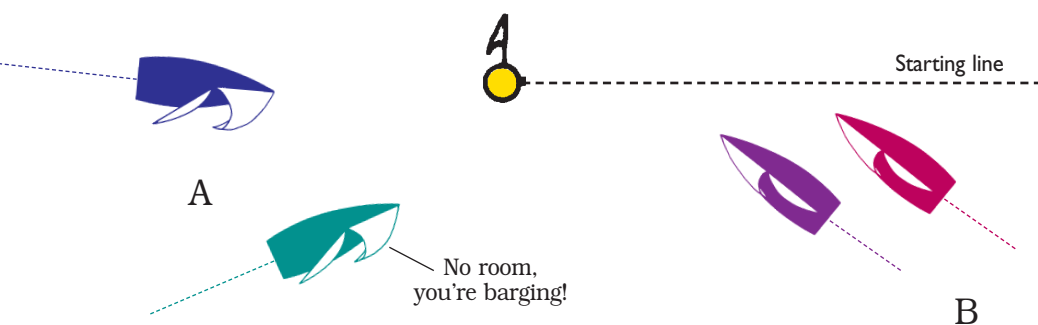
Rule 18 turns off when boats are approaching a starting mark to start, and it stays off until the boats have passed that mark and its anchor line. While the rule is inapplicable, barging is essentially prohibited since boats are neither entitled to mark-room nor obliged to give mark-room at a starting mark.

The typical danger zone for barging is marked by the starboard tack layline to the stern of the committee boat. If you approach the start from the windward side of this line, there's a high risk that you'll be caught barging. Even if you approach the start from below this line you could still be in trouble since boats to leeward can luff head to wind to keep you from passing between them and the RC boat.

You also have to watch out for boats coming from clear astern. You may be luffing before the start and ready to "close the door" on all



Barging is what happens when a boat tries to fit between a leeward boat and either end of the starting line (usually the committee boat). Because rule 18 turns off when boats are approaching an end of the starting line to start, a leeward outside boat (Green) is not required to provide any mark-room for a windward boat that is trying to pass to leeward of the starting mark. The Red boats are all barging here – they are not entitled to mark-room and must keep clear of Green because she is a leeward boat with the right of way.



Barging at the pin end

Though most barging incidents happen near the committee boat end of the line (because almost everyone starts on starboard tack), rule 18 also turns off when boats approach the pin end to start. In Situation A, Green does not have to provide mark-room for Blue to pass to leeward of the pin. These boats must abide by the basic right-of-way rules, so Blue (the windward boat) has to keep clear.

Rule 18 does not apply in Situation B either (because the boats are approaching a starting mark to start). However, this situation is different because the inside boat (Purple) has the right of way. Even though rule 18 does not require Red to give Purple mark-room, Red is still the windward boat and must keep clear.

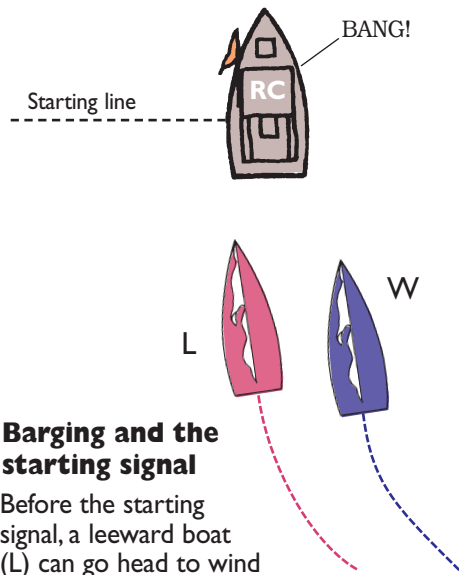


the bargers to windward, but then another boat gets a tiny leeward overlap on you. Now they can luff you head to wind and may actually be able to “close the door” on you!

Note that barging does not end when the starting gun sounds. Rule 18 remains off until boats have passed the starting mark and its anchorline (which is usually well after the gun), so there is no claim to mark-room until after that point. As long as a leeward boat acts in accordance with all other applicable rules, she can deny room to any windward boat at a starting mark, before or after the gun.

Of course, we usually think of barging at the typical windward start, but rule 18 turns off at all starting marks, including those at downwind starts. This can lead to some rather tricky situations if you’re not careful, since it’s fairly easy for boats sailing downwind to “close the door” between themselves and a nearby starting mark.

To avoid barging at a downwind start, I recommend staying away from the windward end (the one to starboard as you are looking downwind). If you make your approach on a fairly tight starboard tack, near the leeward end or the middle, you should be OK. (See the next two pages for more on downwind starts.)

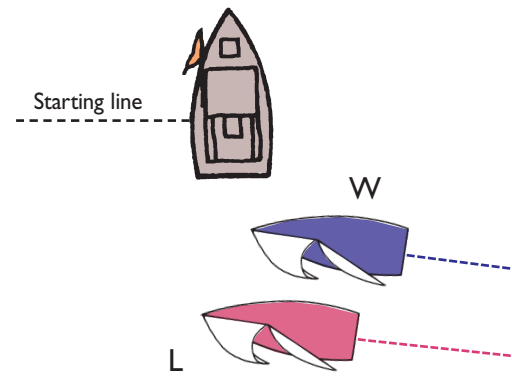


Barging and the starting signal

Before the starting signal, a leeward boat (L) can go head to wind to keep a windward boat (W) from barging between her and a starting mark. This is true even if L got her leeward overlap from clear astern since there is no proper course before the starting signal and therefore no limit on how high a leeward boat can luff.

Once the gun sounds, however, this situation changes. L still does not have to give W any room to pass to leeward of the RC boat. But L may have other obligations. She now has a proper course, so if she got her leeward overlap from clear astern she must fall off (to roughly closehauled) so she is sailing no higher than her proper course. If this leaves enough room for W to pass below the RC boat, she is entitled to do so.

If L did not get her overlap from astern, she may continue sailing above her proper course (as high as head to wind) to prevent W from barging, even after the gun.



Barging and other rules

Here’s another situation where two boats, overlapped on the same tack, approach the committee boat end of the starting line (RC) to start. The leeward boat (L) does not have to give W room to pass below the RC. However, L has been steering a steady course for several lengths, and if she holds that course W will have room to pass below the RC.

At the moment shown above, can L begin turning to windward to keep W from barging? The answer is clearly no. Though L does not have to give W room, she is bound by other rules. Rule 16.1 says that if L (the right-of-way boat) changes her course she must give W room to keep clear. But W cannot turn to windward without hitting the RC boat. Therefore, L may not luff until W is able to keep clear of the RC.

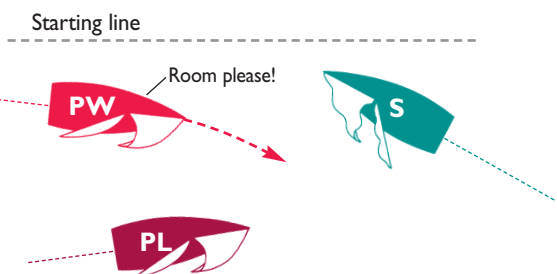
Rule 18 may turn off at the start, but that doesn’t mean you can ignore any other rules that apply.

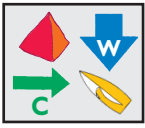


JH Peterson photo

Other Section C rules

Rule 18 does not apply at starting marks when boats are approaching them to start. But there are many other situations on the starting line when rules 19 or 20 apply. A common example is when boats meet a right-of-way boat that is an obstruction. In the example below, two overlapped port tackers are reaching down the line toward a luffing starboard tacker. If PW and PL both want to pass below S, rule 19.2a says PL must give PW room since PL has an inside overlap and they are passing an obstruction on the same side.





STRATEGY

Keys to success at downwind starts

There aren't too many races that start downwind any more, but when they do, it's good to know a few strategic and tactical moves.

Most downwind starts are a lot like upwind starts. You want to be on the line, near the favored end, with speed and clear air. However, it's harder to get a good start downwind because if you're in the front row you often get bad air from the boats that are not. And sometimes it's hard to remember how barging works when you approach a starting mark on a reach or run.

One obvious difference is that most downwind starts involve spinnakers. This places an added premium on preparation and crew work. Here are two pages of ideas about getting a better start when the first leg is a reach or run:

- If you have a choice of headsails, start racing with your biggest one. This might not be the perfect sail for going upwind in the

existing conditions, but you don't have to go upwind – you're just looking for the best speed while reaching to the starting line.

- Since you won't be racing upwind, set your jib leads outboard and forward so they are as effective as possible for reaching. Ease the backstay, outhaul and cunningham to their offwind settings.

- Before the start, make sure you sail the angle of the first leg with a spinnaker. Spend enough time to get in the groove for the existing conditions before you start the race. Use this time to get a feel for the boat, figure out your target speed, and pre-set your topping lift height and vang tension.

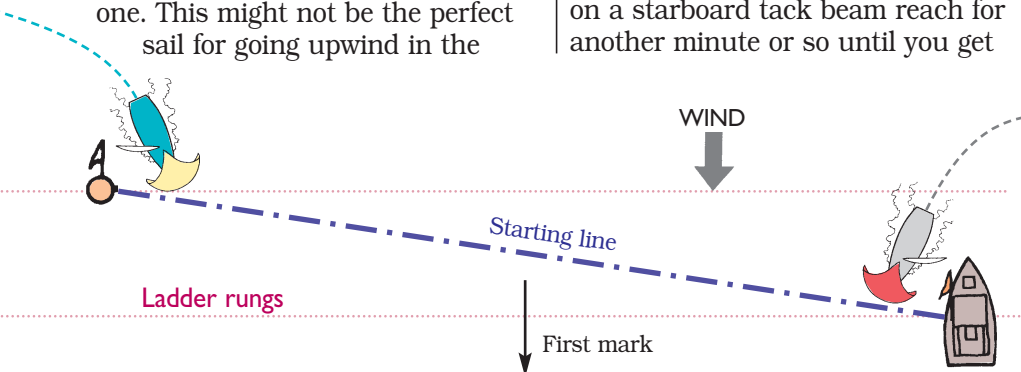
- During the starting sequence, try the following approach: Go to the place where you want to start, then sail a port-tack beam reach for about a minute. Tack and sail on a starboard tack beam reach for another minute or so until you get

back to your starting place. Then tack again and repeat this. Adjust your timing so you end up on the starting line at the gun.

By following this pattern you can practice your final approach a few times, maintain good speed throughout the pre-start, and avoid getting too far away from the spot where you want to start.



JH Peterson photo



Picking the 'favored' end*

At an upwind start, the favored end is the one that's farther upwind, or on the *higher* ladder rung. At a downwind start (one where you can't fetch the first mark), the favored end is the one that's more downwind, or on the *lower* ladder rung.

To determine which end is more downwind, you can use the same techniques you use for finding the favored end at an upwind start. In fact, one easy method is to pretend that you are starting to windward. If you figure out which end would be favored for an upwind start, the other end will be favored for going downwind!

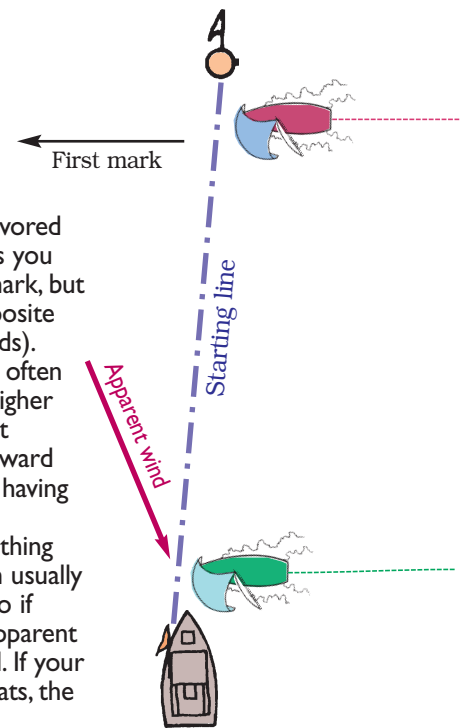
* The real 'favored' end is the one where you will have a better start, taking into account many factors. But often we use this term to describe the end that is farther to windward or, at a downwind start, to leeward.

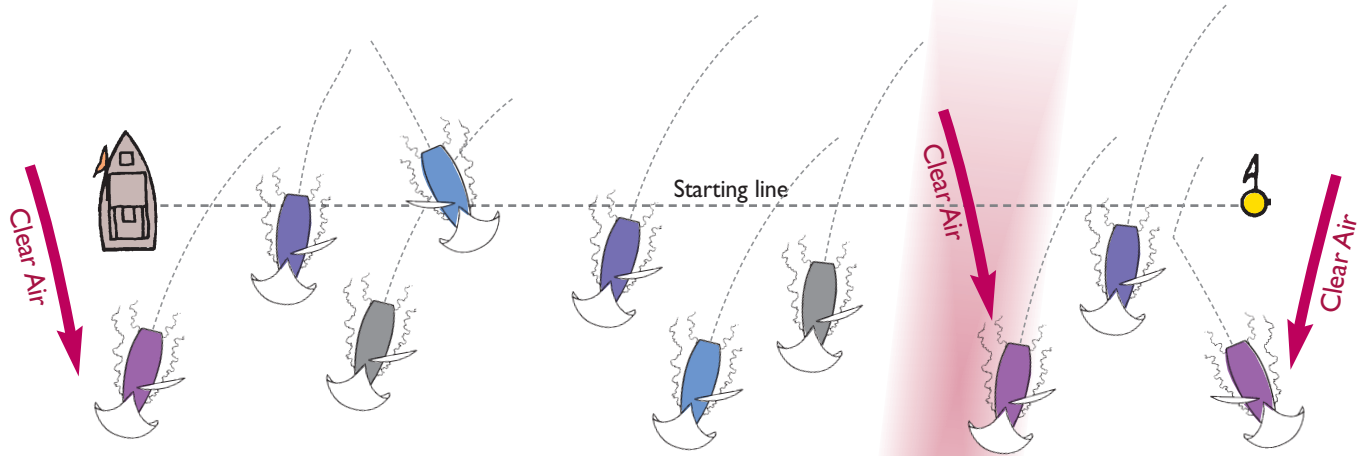
Starting on a reach

When you start the race on a reach, picking the favored end is usually a little more complicated. Sometimes you can just choose the end that's closer to the first mark, but this does not consider the fact that starting at opposite ends will give you different sailing angles (and speeds).

If the wind is light or the first reach is broad, it's often better to start at the leeward end so you have a higher and faster angle of sail. But if it's windy and the first reach is tight, it may be better to start at the windward end, especially if you are overpowered or if you're having a hard time holding a spinnaker.

Another important factor is clear air. One good thing about starting at the windward end is that you can usually avoid wind shadows. That may not be so easy to do if you start closer to the leeward end, unless your apparent wind is forward of the boats lined up to windward. If your masthead fly is pointing at or just behind those boats, the leeward end may not be a great place to start.





Ingredients for a good downwind start

The goals and tactics of starting downwind are not a lot different than starting upwind, except the mayhem is usually compounded with spinnakers.

Front row – You want to cross the line as soon as possible after the starting signal. However, it's harder to restart if you are OCS, so you might want to be slightly conservative here. One strategy is to hold your spinnaker hoist until you are absolutely sure you will not be early.

Good speed – There is never a start when you don't want to be going fast as you come off the line. You can get extra speed at a downwind start by approaching on a beam reach and then bearing off just before the gun so your VMG is higher than normal when you cross the line. Ideally you would have your spinnaker flying while you do this. Clear air is also key for speed.

Near 'favored' end – Survey the starting line, figure out which end is better, and try to start somewhere near there. For example, if one end of the line is substantially farther downwind, you should probably start there.

Able to sail the right direction – When picking a place to start, another factor is your strategy for the first leg. Which side of the run do you like? Make sure you are able to sail that way soon after the start.

Lane of clear air – The tough thing about upwind starts is that if you're in the third row off the line you also have bad air. But if you're in the back row at a downwind start, at least you're sure to have clear air! Your goal, however, is to be in the front row with a good lane of clear air.

Good 'LANE' with clear air

Inside position – On a short run, another tactical factor at the start might be setting up so you will be inside at the leeward mark. If you will round the mark to port, the boats on the left side (looking downwind) may have an advantage.

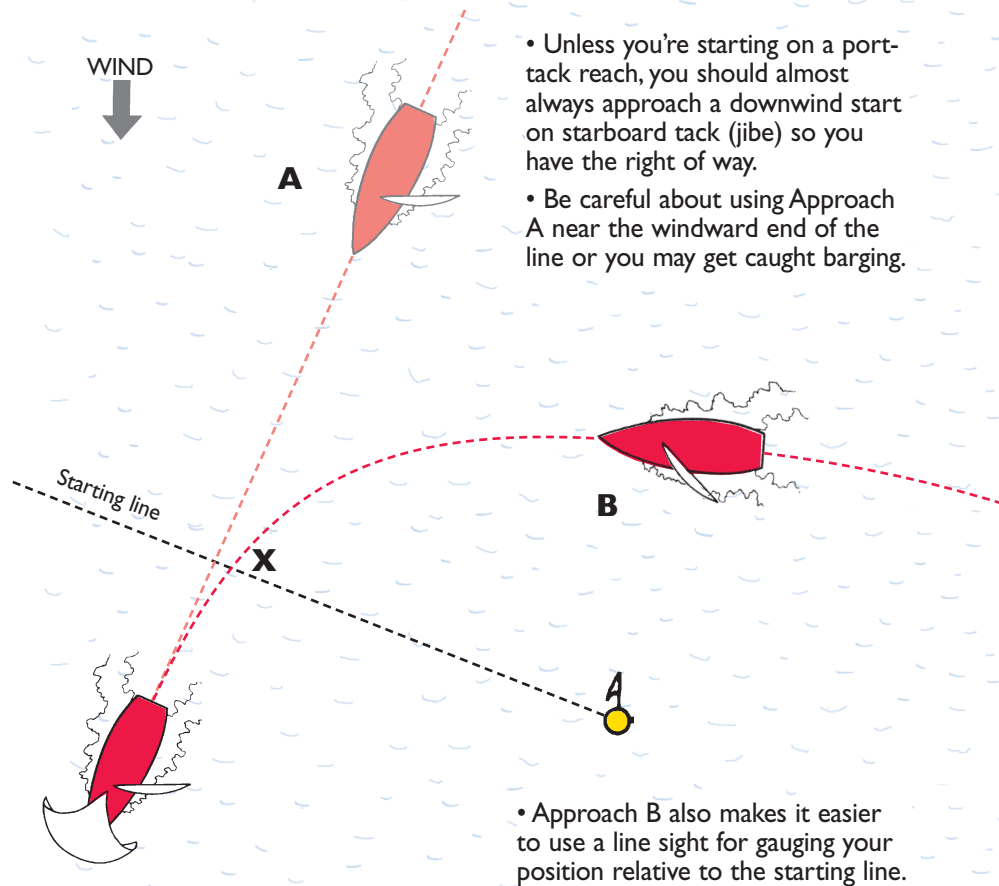
Setting up for a downwind start

Once you've decided where you want to start (X), figure out how you can get there with speed and a lane of clear air. Many sailors approach a downwind starting line on a course that's roughly perpendicular to it (Approach A). My recommendation is to approach the line on a tighter angle, from a direction that is more nearly parallel to it than perpendicular. I like this Approach B for several reasons:

1) You will have better speed when you cross the starting line. A beam reach is your fastest point of sail, so approaching the line on roughly this angle will give you your best VMG when you bear off to cross the line.

2) You are more likely to have the right of way. By approaching the line on a hotter angle, you will be on the leeward side of most boats (including everyone using Approach A) and therefore they will have to keep clear of you.

3) It will be easier to time your start so you cross the line just after the gun. If you take Approach A, you have the least possible flexibility in adjusting your timing. By making your approach roughly parallel to the starting line (and a few boatlengths from it), you can luff your sails (or boat) to slow down and simply bear off when it's time to start.



- Unless you're starting on a port-tack reach, you should almost always approach a downwind start on starboard tack (jibe) so you have the right of way.
- Be careful about using Approach A near the windward end of the line or you may get caught barging.

• Approach B also makes it easier to use a line sight for gauging your position relative to the starting line.



Typical mid-line sag



Starting with a line sight

Mark Miller photos

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PHOTO OP

Line sight in action

In the last issue I talked about the value of getting a line sight, or 'transit', to help you locate the line as you approach the start. Here are two photos we received from a high school sailing coach, taken at a recent Radial regatta, that show this point perfectly.

The top photo was taken just after a start on the first day of the regatta. You can see that most of the boats in the middle of the line were sagged fairly far away from the line. When racing ended on that day, the coach showed this photo to his team. This led to the bottom photo, taken just before the start of a race on the second day. Here one of his sailors (with the red hull) is using the person in the power boat at the pin end, plus trees on the island at right, as a line sight. This enabled him to get a great start with clear air, well ahead of the sag in the middle of the line.