

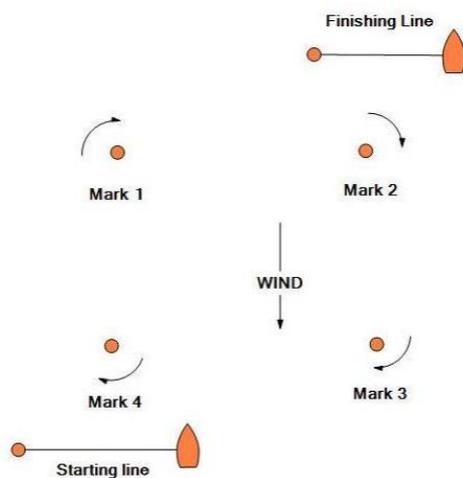
Three- boat Team Racing

Team manual for the GSYS team racing team.



Courses 1 and 2

Sample race course (Cumberland cup)



COURSE DIAGRAM FOR COURSES 1 & 2

- Course 1 Start – Mark 1 (s) – Mark 2 (s) – Mark 3 (s) – Mark 2 (s) – Mark 3 (s) – Finish
- Course 2 Start – Mark 1 (s) - Mark 4 (s) - Mark 1 (s) – Mark 2 (s) – Mark 3 (s) – Finish

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Also check <http://gsystemrace.blogspot.se/> for videos and more material to study.

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Team racing strategy

TOBY HEPPELL June 30, 2016

Team racing is a game of strategy that requires brains, skill and teamwork -top team racers Ben Field, Andy Cornah and Steve Tylecote share some tips with Georgie Corle

Team racing success depends on having a strategy that all team members are working to. The top teams spend hours pushing model boats around, before putting their plans into practice on the water. If you're about to take up or looking to improve your team racing - maybe at your university sailing society - what are the key elements? Team racing can be held with two, three or even four boats per team, however three-boat team racing is the most common type.

Starts: breaking it down

Winning the start puts you in control. Andy Cornah - ISAF world team racing champion, twice Wilson Trophy winner, and three times national champion - explains: 'The aim is to have all three boats hit the line on the gun and sailing quickly.'

Ben Field has sailed on the same successful team as Andy since university, when they were three-times BUSA champions. He suggests: 'Allocate a position on the start line to each team member - committee boat, middle and pin. This helps ensure you have balance across the starting line and going up the first beat to mitigate any significant shifts. The middle boat should support his teammate at the more biased end of the line, as this end has more challenges:

Establishing the laylines to the start line is therefore critical, usually directed by the crew. Accurate time and distance also comes into play. Decide early whether to tall or lead your opposition into the start and position yourself accordingly. Ben says: 'In light airs, look to lead in, but in a breeze, consider pushing the opposition in early by tailing them.

'The more pin bias, the harder it is to tail someone and get an overlap to push them over the Line early. For this reason, lead your opposition into the start zone. When the line is starboard bias, tail your opposition (as long as you aren't late!) as you have a greater chance to hook under them and potentially push them over the line.'

Cracking the combinations

Winning Team	Losing Team
1,2,3 = 6	4,5,6 = 15
1,2,4 = 7	3,5,6 = 14
1,2,5 = 8	3,4,6 = 13
1,2,6 = 9	3,4,5 = 12
1,2,DSQ(7) = 10	3,4,5 = 12
1,3,4 = 8	2,5,6 = 13
1,3,5 = 9	2,4,6 = 12
1,3,6 = 10	2,4,5 = 11
2,4,5 = 11	1,3,DSQ(7) = 11
2,3,5 = 10	1,4,6 = 11
1,4,5 = 10	2,3,6 = 11
2,3,4 = 9	1,5,6 = 12

Knowing the winning and losing combinations is fundamental. To vein your points must add up to 10 or less; some aide-memoires that cover most of the winning combos include 'two in the top three' or 'first not last'.

But knowing the 'set play' for your team and determining how each team member will react in any given position is what will give you the edge. Andy says: 'There are 10 winning combinations, and eight of these have first in them, so getting and keeping first place is important. 1,2 anything, 2,3,4 or 1,4,5 - these are 'stable' winning combinations, and if you are not in one of those, look to get into them. Think about which combination you are closest to - for example, in a 1,3,6 you want to convert to a 12,6:

Winning teams want to minimise risks and sail a clean race, whereas losing teams want to deliberately compress (bunch up) the fleet and mix things up to maximise place-changing opportunities.

Showdowns

A 1,4,5 versus 2,3,6 is one of the most common scenarios in team racing, in which some of the most common manoeuvres come into play with some of the tightest races as a result!

Each boat should know what he is trying to achieve. Usually, boat one will keep first. Fourth and fifth are trying to widen the gap between them so that fourth can push the race on, and fifth can hold sixth firmly in last place - remember, 'first not last' wins.

If, however, as first place you are feeling vulnerable, alert your teammates. Your next move then is to initiate a conversion to a 2,3,4 by slowing up second, as your teammates switch into fast mode and sail past the pair of you as quickly as possible (see diagram).

But before you get to this stage, boats two and three will be working together to attack boat one. Ben says: 'Double cover on the run or split tacks on the final beat - but only if overtaking is realistic. Aim for 1,3, then work quickly to convert to 1,2:

Boats two and three also have the option of Letting one go and attacking backwards, aiming to take one of the opposition back to sixth. Boat four needs to be wary of this, and is particularly vulnerable on the last beat. 'Avoid getting locked out by boats two or three, and push them onto the finish as fast as you can,' says Ben. 'Keep moves low risk and avoid getting a penalty. This is often a frustrating position as you are in dirty air and being attacked the whole way around the course. If it is light and shifty, keep an eye on fifth upwind and make sure they are always in control of sixth. If the wind suddenly shifts and boat six gets through, you may need to attack them quickly and put them back in sixth. As boat five, aim to create a Large gap between yourself and boat four, slowing and blocking boat six and making it harder for boats two and three to convert him forwards.

Boat six wants the opposite - to push forwards and close up the gap. Ben says: 'When the gap is small, a good trick as boat six is to go the same way as boat four up the beat, because five will stay with you to try and cover you,

therefore you are forcing boats four and five to sail in the same direction, keeping them together, This is a much easier target for your team mates in second and third to work together to get you through:

Defending a winning combo

If all goes well and you find yourself in a strong position off the start Line, sail fast up the first beat. Remember 1 plus 2 plus anything wins! Split so your team controls the left, middle and right. Try to have one boat coming in on the starboard layline for mark one, a very strong position with the traditional starboard-hand S-course. If you find yourself almost but not quite there in 1,3, the top reach is a great place to convert, with the first boat slowing second enough to allow the third through, usually with a luff. Remember, attack them before they attack you! Once in a 1,2 position on the run, stick together to defend the left-hand side (looking down the run), which will give you both starboard and inside overlap advantages at mark three.

Steve Tylecote, multiple world, national and Wilson Trophy champion, says: 'Defending the run is about being comfortable sailing angles or goose-winging, and being able to switch between the two. Great gybing is essential. At mark three, set up the trap well outside the zone, and only go into the zone when forced to: Keep up communication between team mates and work together to pre-empt any attacking moves. Try to minimise risks and manage each situation without collisions. Up the final beat, aim to defend the right, but never neglect your opposition, especially in shifty winds! Andy says: 'As you round, first and second should continue on port until third tacks, at which stage first should tack and cover them, leaving second to cover fourth.' If covering at close quarters, Steve says: 'Know

how to dish out wind shadow, and where to position yourself to prevent a boat tacking. Don't take too much risk as the windward boat.'

Attacking the Lead

If you find yourself on the losing side of a 1,2 paring, look for opportunities to attack. Andy says: 'On the run, third and fourth should double-cover second place; try to slow them enough to get one of you overlapped inside by mark three.' The conversion often comes down to the last beat, where the secret is to upset the pairs, to prevent your opposition from crossing the line in 1,2. Andy explains: As you round the mark, split so that one boat goes hard left, the other hard right. When they split to cover you, any wind shift will "unbalance" their 1,2. Whilst one boat sails fast, their team mate can try tacking lots, assuming the opposition will cover, match their tacks, and consequently sail slower,' Steve says: As the attacked boat, you need to be skilled at initiating a tacking duel at the right moment, swerving around higher/lower to create room to tack out from under someone, and always look to come back at them on starboard when you do tack out'

Winning the easy way

Team racing may seem complex, but in fact, the top teams strive to simplify things whenever possible. 'Make sure you have raw boat speed. If your team can get away from the start quickly then there is no need to team race,' says Ben.

'Don't try any glory moves too early in a race! Keep your team in the race; a 720 turn at the windward mark really puts your team on the back foot. Riskier moves should be left for the last beat as a final ditch attempt if you are losing. Taking less risk is even more important when in first?

Make sure your teammates are on side by communicating (between the three crews) what your team's current combination is and what you are converting to. If you have all agreed on, and practiced, your set play for each conversion in advance, each boat will - in theory - know where to position themselves and what they need to do to make that conversion happen.

Mark roundings are a great place to hold back your opponent and convert your team mate through. Set up the 'mark trap' at the edge of the two (not three!) boat length zone, not next to the mark, to give yourself space to play with. 'Always come out of the mark trap with at least the combo you went into it with, don't get greedy,' says Andy. 'Make sure your team mate who you are converting through knows which side of the trap the opposition boat is going, and ensure they go to the opposite, so they don't follow them into the trap too'

<http://www.yachtsandyachting.co.uk/home-featured/team-racing/>

Teams Racing Tactics

Always think about the big picture!!

Team racing is about getting the three boats from your team across the finish line in a winning combination through sailing skill, rules knowledge and cunning strategies and tactics. Good team racers combine all of these elements in their winning ways!

Read the Rules of Part 2 and Appendix D of the Racing Rules of Sailing so that you are familiar with the rules governing team racing. And above all read the sailing instructions for this event!!

Starting – Defensive

Some suggestions if you are being hunted in the prestart. The general idea is to create confusion for your opponent by introducing as many variables into the equation as possible. Each variable gives you a chance to turn the tables.

- Go head to wind. A good move if you want to stay in the same spot for a period of time for example to judge your run for the line.
- Try to lead opposition into committee boat
- Swap opposition boats with a boat from your own team.
- Lead opposition into a boat from your team on starboard or a boat from their own team.

Starting – Offensive

If in control of an opponent before the start try to:

- Force opposition boat away from start line preferably downwind.
- Force opponent over start line with less than thirty seconds to go without crossing yourself.

Upwind – Defensive

If an opponent tries a slam dunk you:

- Bear off before opposition boat has completed tack to get out of their wind shadow.
- Tack immediately.
- Never do both, choose one and stick with it!!!

If cover cannot be shaken:

- Tack on another opposition boat.
- Get a teammate to tack on the boat covering you.
- Do a double tack (two tacks in quick succession) This is an absolute last resort and relies on two conditions to work: a) the opposition boat must follow you through both tacks and b) you must be able to tack faster than your opponent.

Upwind - Offensive

Many believe the first beat of a team race should be sailed as if it were a fleet race. While this approach has some merit, especially against weaker sailors, it is generally inappropriate in

Teams Racing. Alternatively a lot of people forget that a team race is still a yachting race and things like shifts, gusts and tidal factors can easily win a team the race.

- Sail the shifts.
- Take into account where the tide is strongest and which direction it is flowing.
- Sail the favoured side of the course relative to your opponents.
- Tack only if you will gain more out of tacking than you will lose in the tack.
- Think about the big picture!!

Reaching and Downwind - Defensive

On the first beat of a team race you should

- Think about buoy room for the next marks (two and three) before you even round mark one or mark three. Marks are a rare opportunity to pass the opposition.
- Do not take an opposition boat up if there is another opposition boat behind them. Only take an opposition boat up if that boat is followed by one of your team mates and that team mate is not followed immediately by another opposition boat. In reverse these are offensive moves.
- Generally think what is the best overall option for the team.
- Think about the big picture!!

Reaching – Offensive

- The crew's position in the boat and trimming of the sails are crucial - almost to the point that this should be all they are concentrating on in heavy winds.
- Think about the big picture!!

Downwind – Offensive

- Crews do not sit there for the ride!! They should constantly be watching the immediate opposition and tell the skipper:
 - 1. What other boats are doing.
 - 2. What gusts are coming.
 - 3. Whether the boat is going fast relative to other boats.
 - 4. If the team is winning or losing.
- If one opposition boat rounds in front of two boats from your team, one boat sails the fastest course to bottom mark while the other boat covers the lead opposition boat.
- Think about the big picture!!

Finishing

- Do not finish if your team is losing! Once you cross that line you cannot influence anything on the race course. You have to try something or be able to see that another team member can and will do something. Look before you finish and think about the big picture!!
- Remember that there are a total of 21 points available and your team's score must be 10 or less for a winning combination.

Strategies and Tactics

The ability to formulate a strategy, change it as needed, and execute flawless tactics to carry it out will determine your success as a team racer. You can think of your strategy as your plan for winning, and tactics as the tools you use to bring the plan to fruition. In team racing, there are as many ways to win a race as there are winning combinations. Thus, from the moment the race begins you and your teammates will be seeking to achieve and maintain a winning combination. However, which combination you pursue will undoubtedly change at points during the race. For example, if your team gets a great start - first, second, and fifth off of the line - your initial strategy may be to go fast and hope for a breakaway 1-2-anything at the first mark. Later in the race, circumstances may change such that a 2-3-4 looks like the most feasible winning combination, and achieving those finishes will be your new strategy. Your opponent will rarely make it easy for you to get and hold a winning combination, so your ability to adapt to the changing position of all boats will dictate your strategy as the race progresses. Think about the big picture!!

Your strategy will only be as good as your tactics. In team racing, tactics refer to the manoeuvres and positioning of the your boats relative to your opponent's. In order to compete both fairly and with cunning, you must have a strong grasp of the racing rules. A good team racer uses the rules to their advantage and finds opportunity for gain at all points in the race. Mark roundings, in particular, are often where substantial lead changes occur. Close-quarters manoeuvring at the marks requires a thorough knowledge of rules and fast decision making. Failure to anticipate an opponent's boat placement and attack can take you out of the race very quickly. Think about the big picture!! Below are some of the more common tactical manoeuvres encountered in a team race. The descriptions describe the execution of the manoeuvres.

The Mark Trap

Mark traps are used frequently in team racing. The basic idea is arrive at a mark prior to your opponent, slow down, and then force the opponent to round outside of you (because they fail to obtain an inside overlap at the two-boatlength circle.) When the opponent begins to round outside of you, you accelerate and create an opening between your boat and the mark. Ideally, a lagging team mate will sail through this opening, passing both you and the opponent, while the opponent remains trapped well outside of the mark. This manoeuvre is often used at the gybe mark, however it can be employed at all other marks. The new racing rules increase the effectiveness of this manoeuvre by eliminating "mast abeam," the position at which the outside opponent could force you to round the mark.

Pinning an Opponent

Team racers frequently try to control the course and progress of their opponents by covering them closely on beats. When a boat is so tightly covered that it cannot tack, it is 'pinned.' Often, the only way to free a pinned team-mate is to pin the opponent who has them trapped. The idea is to aggressively sail into a covering position and prevent the opponent from tacking while your pinned team-mate tacks and ducks away to clear air.

Sailing High on the Reach

Everyone knows that the shortest distance between two points is a straight line. Well, when you are behind in a team race, a common tactic is to force your opponent to sail anything but a straight line to the next mark. One or more boats on a losing team will often sail high angles on the reach legs in an effort to draw the leaders away from the rhumb line. If the leading boats defend the high reach lanes, it may be possible for one boat on the losing team to sail straight into a leading position, simply by sticking to the rhumb line. If it works, this tactic can change the complexion of a race significantly by the time the boats reach the next mark.

Quick Rules

The Racing Rules of Sailing (RRS) apply to team racing except as modified by Appendix D – Team Racing Rules of the RRS. The Rules of Part 2 – When Boats Meet are particularly important and a good knowledge of these rules can help give a tactical advantage. Here's a summary of them with a note on those which are changed for Team Racing under Appendix D

RRS	What it's about
10	port/starboard
11	windward/leeward
12	clear astern/clear ahead
13	while tacking
14	avoiding contact
15	acquiring right of way
16.1	changing course
16.2	changing course when crossing
17.1	without luffing rights
17.2	windward or clear ahead's proper course (Change in D1.1 (a))
18	marks and obstructions
18.1	when 18 applies
18.2	room
18.3	tacking at a mark
18.4	is deleted by App D D1.1(b)
22.2	addition to the basic rule in D1.1 (b)
22.3	additional rule in D 1.1 (d) on interfering with another boat
41	outside help can be given by a team mate D1.1 (e)
44	penalties for breaking a Rule of Part 2. D2.1 (b) (See below)

Read also the definition of *Room*

Team Racing Questions:

Question: I'm 1st of a 1-5-6 at the windward mark, what do I do?

Answer: Keep the 1st and trust your teammates to execute a Hi-Lo on 4.

Question: I'm 1st of a 1-5-6 at the leeward mark, what do I do?

Answer: Execute a mark trap and keep the 1 unless you can take out two opponents.

Question: What are winning combinations?

Answer: Winning combinations are any team score which is 10 or less, such as

1st-2nd & anything, 2nd-3rd-4th, 2nd – 3rd –5th or 1st and not last, etc.

The Umpires and Penalties on the Water

This event will be fully umpired and there will be a two flag call system in place.

If you are in an incident in which you believe there is an infringement the following action is required: If you are the protesting boat at the time of the incident, you should hail PROTEST and display the red flag supplied immediately. Make sure that the hail and display are heard and seen by the following umpire boat.

If you are the protested boat you must now decide if you are in the wrong and if you want to take the penalty. To take the penalty, you should immediately indicate this by holding up a hand with an open palm and indicating your intention. Then sail clear and perform your 360° Penalty Turn.

The protesting boat must give time for the protestee to respond. However, if after a 20-25 second time elapse there is no response, she should then display the yellow flag and call for an umpire to decide the protest. The umpires will only respond to this yellow flag.

If the umpires decide that there has been a rule infringement, they will show a red flag while pointing at the boat which infringed and calling her sail number. That boat must then sail clear and perform her 720° Penalty Turn.

A green flag will be given if a) there was no infringement, b) the hail and red flag were not timely, c) the yellow flag was displayed too late or too early for the protestee to respond or d) the umpires did not have a clear view of the incident and cannot decide the issue. No penalty is imposed by the green flag.

If there is a major incident, the umpires may display a black flag. This means that the protest will be taken ashore or afloat after the race. The black flag does not impose a penalty, and you should continue to sail on to your finish.

Keep your eye at all times on the BIG PICTURE

THREE WINNING TEAM RACE MOVES

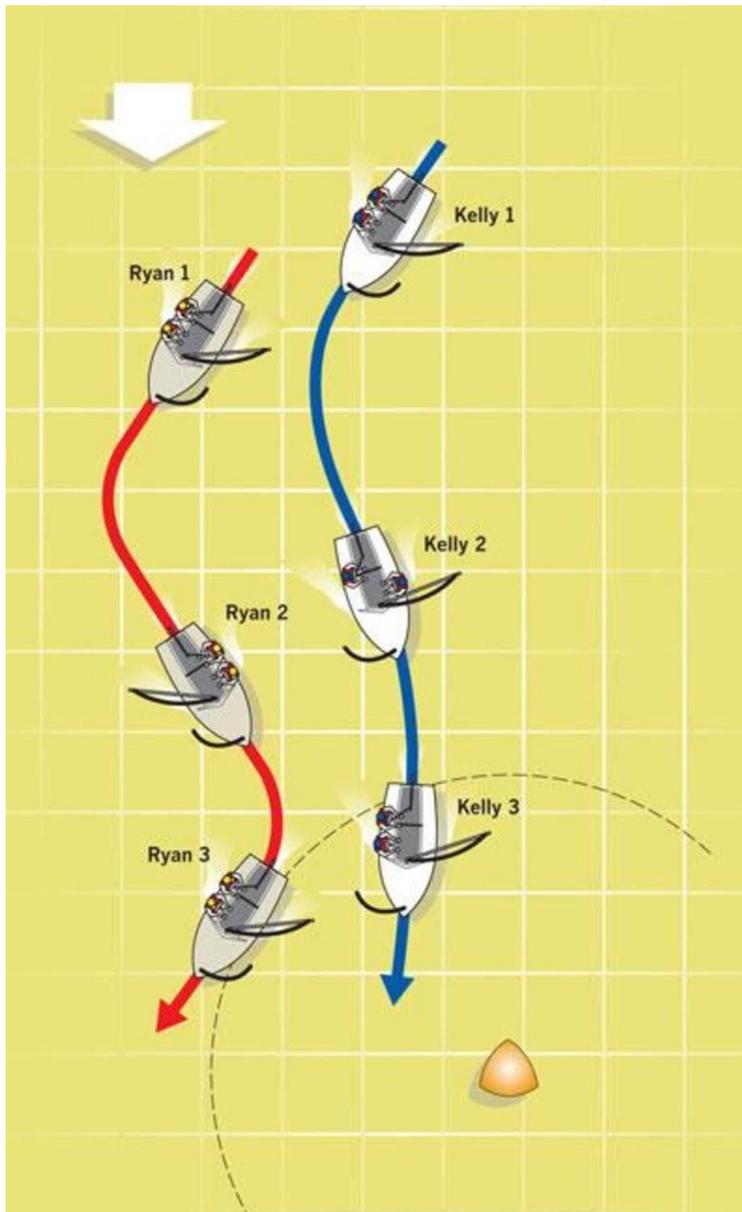
At the upper levels of team racing, many sail according to the same “playbook.” In the end it all comes down to which team can execute the play the quickest. Here are some moves to help you execute and get your team across the finish line in a winning combination.

By Amanda Callahan, Illustrations by Kim Downing March 12, 2013

The “Patrick” Super Low

Skill Level: Champion

Former Silver Panda sailor Patrick Hogan and crew Carlos Lenz surprised opponents all the time using this move.



The scenario: Kelly and Ryan are running downwind on starboard with both sails to leeward at position 1. As the clear astern boat, Kelly is closing the distance to Ryan. Ryan will likely head up in order to keep his air clear and maintain the lead. At the same time, he wants to protect the right-hand side of the run (looking upwind) to preserve his starboard advantage at the leeward mark; Ryan is eager to jibe to port once a serious threat is detected.

How to execute:

1. Patience is required. Kelly sails “super low” by the lee with the wind flowing from leech to luff and filling the jib, possibly taking the vang off too. She’s looking to create some separation to the inside and make Ryan nervous. When Ryan jibes to defend the starboard advantage at position 2, Kelly gets him on starboard.

2. Timing is everything. Kelly keeps an eye on Ryan; when he turns forward to take stock of the rest of the race, she breaks low to a wing while heeling the boat to windward. She has to sail as far by the lee as possible to create the illusion that she’s going to jibe. Ryan will likely go with Kelly in

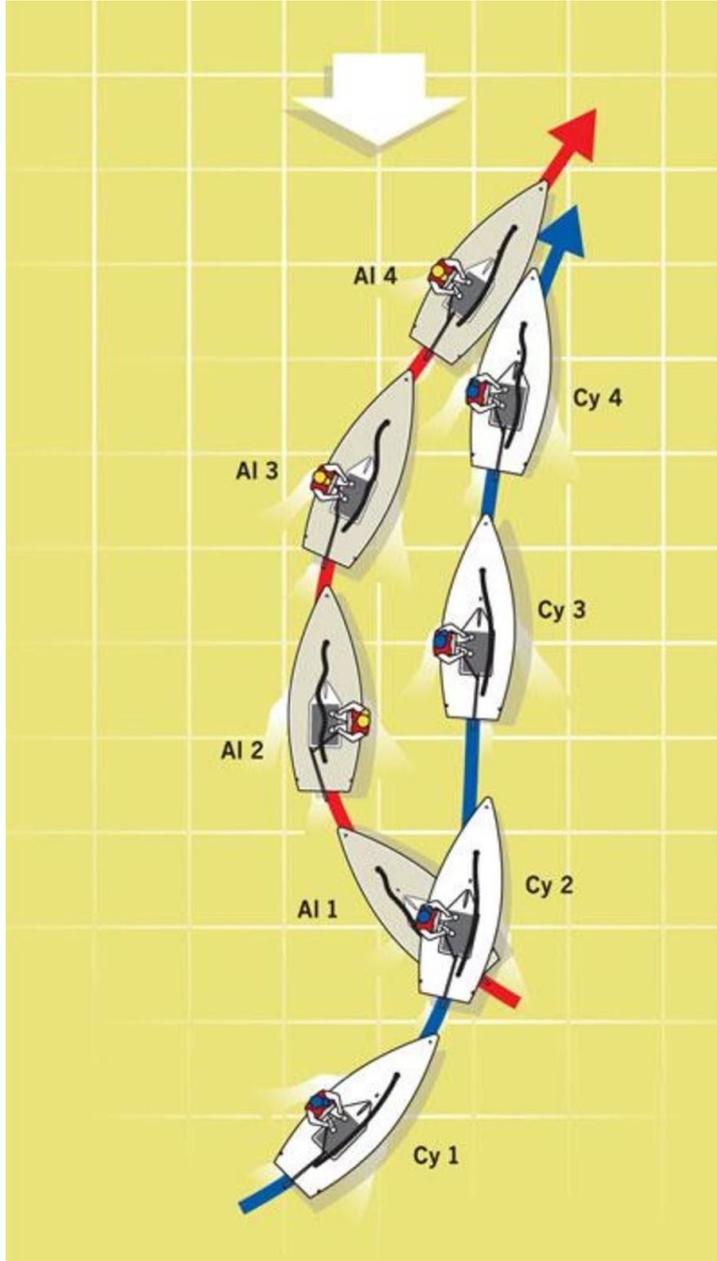
the interest of protecting his starboard advantage. This time, she will catch him more by surprise on starboard.

The Slam Punk

Skill Level: Varsity

This is the anti-Slam Dunk, where you punk the dunker. This is Call D4 in the Call Book for Team Racing, but it has to go in your arsenal of moves.

The scenario: Going up the beat, Cy is on port tack and in a position to closely duck AI on starboard in position 1. Cy suspects AI will tack on him.

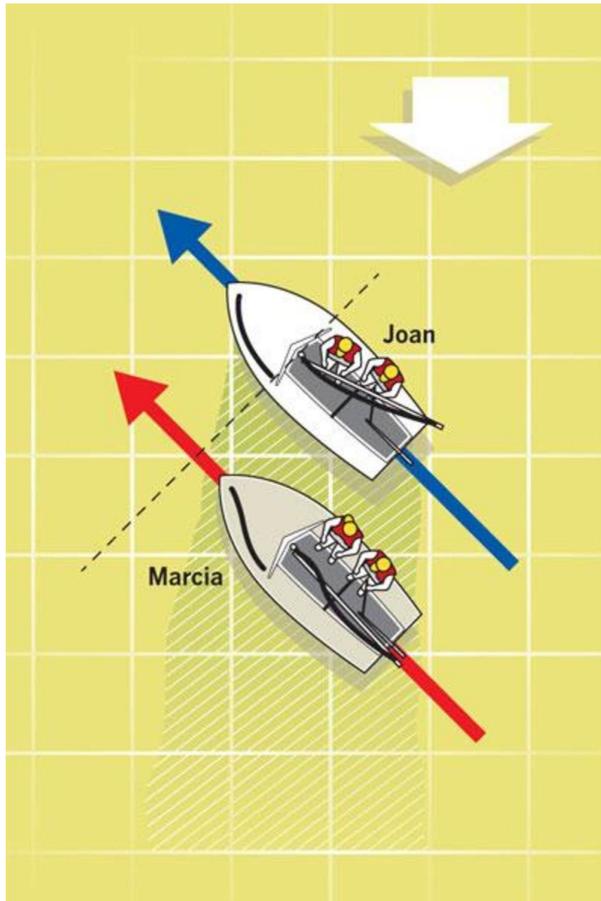


How to execute: As AI turns head-to-wind to tack in position 2, Cy sails above close-hauled and heels to windward. Once AI passes head-to-wind, at position 3, he must keep clear of Cy. Essentially, Cy takes away AI's room to complete his tack. AI will likely (a) foul, (b) execute a bad tack, where he can no longer control Cy, or (c) realize that he won't be able to complete the tack and go back to starboard after two downspeed maneuvers. In almost all of the cases, Cy exits by putting his bow down and extending on port, now able to come back at AI later with starboard advantage. If you're in AI's position, anticipate that an opponent will do this to you; consider leebowing to maintain starboard advantage.

The Super Slow

Skill Level: Junior Varsity

The scenario: Two teams of two boats are on the last leg of the race; the team with the last place boat will lose. Joan is in first and needs to get her teammate out of last by slowing Marcia.



How to execute: Joan positions her boat directly to windward of Marcia with about two feet of separation. Joan pulls her boom to windward, creating a huge wind shadow from which it is hard for Marcia to escape. As the skipper, Joan must put the mainsheet and tiller in her aft hand and pull the boom as hard to weather as the conditions permit with her forward hand. In medium to heavy breeze, Joan's crew must hike extra hard and use the jib for speed control. Joan can also help control her speed by letting the boom "breathe" to leeward to get going again.

Bonus Move for Crews: Anthony's Jib-Sheet Crossover

In his 2001 Sailing World article, "Seven Speed Tips for Collegiate Dinghies," Anthony Kotoun described the jib-sheet crossover.

While this technique is helpful for fleet racing, it is really best suited for team racing.

The scenario: You round the windward offset on a windy day with an opponent not too far behind. You're on a broad reach, trying to extend down the run. A puff brings your opponent within half a boatlength, and they try to pass on the high lane.

How to execute: As a crew, you normally go down to leeward when reaching and hold the working jib sheet around the outside of the shroud. If your opponent attacks high, you'll be delayed a few seconds as you pull the slack out of the working jib sheet through the block to get to the windward rail, by which time your opponent will have rolled over you. With the jib sheet crossover, however, you trim from the leeward rail (outside the shrouds) with the lazy sheet and keep the would-be working sheet fairly tight through the block. As soon as your opponent attacks high, you instantly grab your preset working jib sheet from the block, hop up to the rail, and hike to keep your air clear.