The Art of Team Racing
by Gary Bodie and Ken Legler
Henry Hill illustrations

Team racing is a team sport, and set plays may be diagrammed with Xs and Os, just like in football or basketball. You could go to the library and find 100 books on football formations and plays, but if you were very lucky you might find the one book on team racing — Eric Twine's Dinghy Team Racing. It is virtually impossible to design a new football formation, but the interesting thing about team racing is that it hasn't yet been fully developed. As college coaches we've had the opportunity to create playbooks for our teams and been subject to humbling experiences demonstrating the limits of our knowledge of the sport.

There are fewer than 10 teams in the world who have a comprehensive playbook, and even they would readily admit that they haven't covered every situation. Just a couple of years ago a team could win the college team racing nationals or the US SAILING Hinman Trophy by having a better playbook than the competition but, as the popularity of team racing grows, that window is closing. Now, when you reach the championship round, you're sailing against other teams with a solid plan, and victory will depend on execution.

At the grassroots and local level, though, a couple of practice sessions and mastery of a few basics can open the door to some great racing. On the following pages we've outlined the basic team race moves, and some philosophies behind their use. After you've taken it all in, check out our mock race on page 64.

Working Backwards: Finish to Start
The most difficult dilemma in team racing — for novices, and experts alike — is distinguishing between when you should be actively team racing and when you should be simply going fast and hitting shifts on your own. Under team racing's low-point scoring system (see sidebar, next page), a team of good, fast sailors who ignore the team-racing aspect and treat the race as a six-boat fleet race will frequently defeat a team of fast sailors who have intermediate-level team-racing abilities, but who try to do too much, and lose track of windshifts, boatspeed and common sense. However, an advanced team-racing team with solid boatspeed will defeat the fleet racers 9 out of 10 times, and a slow team won't beat anyone, regardless of its team-racing skills.

Making this distinction on the first beat is much more difficult than on the final beat, yet the advanced teams do actively team race on the first beat, and often convert very subtle advantages into an overwhelming lead at the windward mark. The ironic secret to learning these advanced skills is NOT by practicing.
Three-on-Three Team Race Scoring

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**WINNING COMBOS**

Good team racers do not add up places to find out who are winning, rather they see combinations and manipulate opponents to achieve or maintain winning combinations. As all 10 winning combinations are a lot to remember, competitors have developed a system of groupings that cuts the number in half (above). Taking the grouping system one step farther, top competitors talk about "stable" or "dominant" winning combinations to describe their ultimate team-racing goal. Once a team achieves a stable combination, it becomes much more difficult for the losing team to attack.

**UNSTABLE COMBOS**

An "unstable" winning combination may be defined as one in which the opponents in the corresponding losing combination need not chase boats ahead, but may convert their losing position to a winner by stopping and attacking boats astern. The 1-3-5 is a classic example of an unstable winning combination, because the losing team in the 2-4-6 combination need only attack their opponents in third and fifth to achieve a 2-3-4 and need not bother chasing after the opponent in first place.

**ALTERNATIVE PENALTIES**

The alternative penalties used in team racing vary and competitors in the U.S. have recently experimented with on-the-water umpires, 360s in place of the green flag and 720s for penalties imposed by an umpire, all of which are gaining popularity. If you're using the more traditional green flag alternative penalty it adds 12.5 points to the score of a team that accepts a penalty.

**Tactical Commandments**

- Do unto your opponent astern as the opponent ahead is doing unto you.
- Never let one boat occupy two of yours.
- Return to the middle with your pair when you're behind.
- Don't engage an opponent unless you have a teammate behind you.

On the ride home we discussed what had gone wrong, and I learned that two skippers hadn't even realized what combination we had been in, and the other didn't remember any of what we had discussed. Somewhat frustrated, I proclaimed that we weren't going to do anything else at practice until we had mastered that one situation, no matter how long it took. (Privately, I figured an hour of work would take care of it, so I was shocked when we had spent over a week, and it still wasn't perfect.) But working on the 2-3-6 had forced us to learn about the 1-4-5 and from there it wasn't difficult to comprehend the variations of 2-4-6, 2-3-5, 2-3-4, 2-4-5, 1-4-6 and 1-5-6. We quickly mastered those combinations and went on to the 1-2-x and the 1-3-x. At this point, we had only a few days until our next team-racing regatta, and we hadn't spent any time on reaches, first beats, or starts. You can't imagine how pleasantly surprised I was to find that the team somehow now could see when to team race on the first beats, and when to just sail fast and hit shifts. It was simply amazing, and I have subsequently always taught team.
Upwind Passbacks

Generally speaking a passback is any maneuver that moves one or more of your teammates ahead of an opponent by forcing the opponent back, and a number of moves fall under this umbrella term. In its more specific sense, a passback involves three boats — two teammates and an opponent — on a windward leg of the course.

STANDARD

In a standard passback, the windward-most, leading teammate slows the opponent covering its teammate by setting up to windward and ahead of the middle boat and luffing its jib while its teammate either sails through to leeward or tacks out of the opponent's cover.

The secret to defending against this type of passback is positioning, anticipation, and exquisite boat control at low speeds. In a thrash-by-situation if the middle boat is too far forward, the boat to leeward of him will be able to tack away, while the opponent ahead slows him relentlessly. If the middle boat is too far aft, he will be spat out the back as the boat to leeward sails by. If the middle boat is too far to windward, he will be controlled by the opponent to windward but have no control over the opponent to leeward. Finally, if the middle boat is too far to leeward, he will be in danger of fouling the boat below him.

PICK

The pick is a variation on the standard passback which shuffles the boats' positions almost instantaneously on the first approach. The lead boat swoops down on a reach toward an opponent covering a teammate just as the teammate to leeward tacks out. If the opponent in the middle attempts to tack and cover, he will be tacking into a foul. This move works best on starboard tack, but may be executed on port also. The key is timing, surprise, and eye contact between teammates. The defense for the middle boat is positioning such that the leeward opponent is unable to tack out, but this inevitably makes the middle boat more vulnerable to being too far aft in a standard passback.

SPEED

Another variation is the speed passback, which is extremely effective if the middle boat does not have a strong covering position to begin with or is set up too far aft in relation to the boat it is covering. In this move the windward boat again sets itself up to cover the middle boat but does not luff its jib and therefore does not lose any speed. This passback takes a little longer to develop, and is not appropriate if the layline is approaching, but the advantage is that the two teammates involved are always sailing at full speed, and lose no distance to other boats not involved.

racing by emphasizing final beat combinations first, and worrying about the rest later.”

Anticipation/Execution

Regardless of where you are on the race course, often the outcome of a move or situation will depend more on its execution than its plan. Obviously, the more you practice, the better you’ll be. There are two ways to go about practicing. You can arrange a practice session with your teammates and hopefully add a few extra boats or you can schedule a few preliminary matches that lead up to the bigger events. We can tell you, though, that the best way to learn is to lose races that matter. When practicing with two boats, try match-racing. With three boats you can use variations of the two-on-one drill, and with four boats it’s two on two, last place loses. This puts an emphasis on attacking and slowing. With five boats you can do three on two, last place loses or pair the two fastest boats up against the other three, giving them a phantom boat that is presumed last or first.

Practice will also help you learn to balance boats' positions on the upwind legs. As in fleet racing, windshifts and current can wreak havoc on winning combinations and good team racers adjust their speed — and that of the boat or boats they’re covering — to maintain or improve their combinations. When properly executed balancing the pairs ensures that boats spread across the course, on close or equal ladder rungs relative to the wind, will reconverge in a winning combination. This is a subtle, but very important, aspect of team racing that involves a solid understanding of the combinations, and timing and coordination between teammates.

In general, communication between teammates should be maximized before races (to prepare strategies and develop boatspeed) but minimized during races. While some teams use verbal codes to call plays on the water, others are much quieter, only saying things like “I’ll dip you” and “starboard” to avoid confusion between teammates.

Sometimes sailors tend to be complacent on the reaches, but big gains can be made here, especially if you’re willing to aggressively attack your opposition (see “Downwind Passbacks” and “Mark Traps”) and get a jump on them.

If neither team has established a stable combination (see “Three-on-Three Team Race Scoring”) by the leeward mark, then the outcome of the race will come down to which team most efficiently executes, or defends against, passbacks on the final beat (see “Upwind Passbacks,” above). As teams improve, it is no longer sufficient just to be able to make the right move eventually; winning teams know they must be executed expeditiously.

The First Beat

Many teams debate whether to team race or fleet race on the first beat. Teams with a moderate amount of team-racing experience may have been burned often enough by trying to team race that they often decide to just fleet race until the first mark. Such a decision can be easily justified; many team-racing championships, if not most, are won with superior boathandling, starts, boatspeed and strategy — the same variables that win short-course fleet races. Many races have been lost by race leaders tacking too many times early in the race to cover. Blasting straight off the starting line into a potentially commanding lead is often a better play than tacking on an opponent that had a bad start. There may be opportunities, however, to team race on the first beat, even right off the start. You just
have to know how to identify them.

If a fleet starts evenly, on a reasonably square line (i.e., everyone is on the same ladder rung), then everyone should be racing for first and/or second with boatspeed, etc. Oftentimes, however, boats are on different ladder rungs, and the order of positions can be determined right off the bat. This happens when the line is heavily biased and/or when some boats start late because they were match racing or because one or more boats had some disaster. In these cases it may be possible to determine the present combination and improve it even though the race has just begun. Here's how:

● Remember your primary goal is to be in a winning combination, preferably 1-2, at the first mark.
● Execute your fleet-racing strategy while team racing. If you start in a header and an opponent is dipping you, tack on them. Assuming you are correct about the next shift, you have accomplished two good things: a) you are going the right way and b) your opponent will either go slow in your bad air or they will tack away from the next shift, falling even farther behind. If you start in a lift and an opponent dips you, let them go the wrong way while you go for first.
● Team race only when the combinations are immediately apparent. For example, on a left-biased starting line, a left shift will give the boats that tack to port from the favored end of the line a considerable lead over the others still on starboard. Now assume you've done this and you are the windward-most, port-tack boat, leading the race while your teammate is in third. Reach off on the opponent in second, take their wind or force them to tack into the header and...boom, the wind shifts right, you and your teammate now have a 1-2 breakaway. Race over, bring on the next team.

Next example, same scenario except reverse the teams; you are clearly in second and your teammates are deep. Reach off and pin the opponent in third, sailing him to a corner, until your teammates catch up — then you have a chance. Or at least avoid being pinned, hang onto second and live for a chance at a mark trap later in the race.

You always have a chance if someone on your team is in first or second. This is why you don't team race blindly on the first beat. If you have your team's best start and you begin tacking on an opponent just because they are there, the other two opponents may sail straight into 1-2.

These principles hold right up to the approach to the weather mark. Here there are opportunities to pin an opponent (or if they are suckers, two opponents) beyond either layline, either by lee bowing them when they are heading toward the mark or by tacking to windward of them and pinning them when they are heading away from the mark. At the rounding you will either be trying to break away, catch up, execute a mark trap or successfully defend against one.

Who's Team Racing Where
Where can you put this team-racing knowledge to work? Team races can be held in everything from Optimist dinghies to J/44s. US SAILING runs a national team racing championship — the Hinman Trophy — and a number of grassroots organizations, the United States Team Racing Association (USTRA), has staged numerous three-on-three team-racing events in Vanguard 15s, 420s and other one-designs, and in college fleets Over the past three years.

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Mark Traps — Take ‘em at the Turns

A mark trap is a passback accomplished at a turning mark. Like most passbacks, it involves three boats — two teammates (A, B) and an opponent in the middle. When the first red boat (B1) reaches the two-boatachleg circle, it stops and waits above the mark but inside the circle.

denying room to the opponent astern (C1). As the opponent does not have room, it cannot go between the red boat and the mark, but the red boat’s teammate (A2) can. If the opponent (C2) tries to go high, the red boat (B2) goes with him.

While the mechanics and pertinent rules are slightly different at windward, jibe, and leeward marks, the intention is the same and the key question remains: When should you attempt a mark-passback and when should you round the mark and sail fast? The answer is in “Rules of Thumb” above. Remember that any mark trap inevitably takes up time and teammates (and opponents) behind will gain valuable distance on you.

The defense against a mark trap is best described by Old Dominion coach, K.C. Fulmer’s, Golden Rule: “Do unto the opponent astern as the opponent ahead is doing unto you.” If you see an opponent ahead slowing down at a mark to set up a trap for you, slow down and trap the opponent astern on your windward side. Stay between the two opponents and fight off the maneuver. Occasionally, you may detect a flaw in the positioning of the opponent setting the trap, and you may be able to break through, ahead of both opponents. This is analogous to scoring a short-handed goal in other sports.

If you see an opponent ahead setting up a mark trap, and you have a teammate immediately astern of you instead of an opponent, then the defense is entirely different. You should sail into the trap at full speed, allowing yourself to be luffed to windward of the mark without fouling out. If the opponent stays with you, your teammate will pass you both, which is a gain for your team, so usually the opponent will abandon the mark trap when he sees you coming in fast. Either he was attempting a mark trap in an inappropriate situation, or he was testing to see if he could slow two opponents. This rule of thumb is one of the “first of a pair (of teammates)” rules. In this situation the “first of a pair” deliberately sails into a mark trap to break it up. Never allow an opponent ahead to slow two of your team.

and in college fleets for the past three years. The USTRA also publishes approximately three newsletters a year and maintains contact with team racers from abroad as its members work to refine spectator-friendly racecourses and alternative penalties.

Team racing has been a minor part of junior racing for many years and areas with large numbers of a particular boat, like southern California (club FJs) and southeastern Massachusetts (club 420s) have traditionally been junior team racing strongholds.

The discipline also has a strong history in high school sailing. Originally the domain of the New England prep schools, high school team racing has grown throughout the nation. Though team racing as a high school sport is prevalent in New England and California, it is now becoming quite popular in the Mid-Atlantic, South and Midwest as well.

Despite its popularity in the high schools, team racing still represents only a fraction of the racing in college. While many of the Inter-Collegiate Yacht Racing Association districts have regional team-race regattas, there are only two on the intersectional schedule — both scheduled before the team racing nationals in June. Nevertheless, a few teams have become extremely proficient with the three-on-three format, and the biggest teams in the mid-Atlantic devote the first month of the spring season to team racing.

A few one-design classes, such as Optimists and Snipes, have built a team racing trophy into other major championships. The Optimists used to race all the teams (five boats each) against each other in one huge chaotic race at their world championship; now it is a four-on-four series. The Sunfish and International 14 classes have decades of successful team racing events that have recently died out. The Laser class has also tried team racing at different levels and the Tornado class is currently developing their own thrilling style of two-on-two team racing.

In inter-club team racing, the New York YC has the highest profile with an ambitious schedule in New England, California and abroad. Nationwide, though, many other clubs have team raced against neighboring groups for years. And, in a more recent trend, other yacht clubs have also been purchasing fleets of club keelboats, such as Ideal 18s, to make team racing more available to club teams. Likewise, challenges against neighboring or even distant frostbite fleets has been going on, if sporadically, for many years. Larchmont YC held the biggest — a 10-team international invitational team race using Intercel dinghies in a five-on-five format.

Internationally, team racing is probably the most popular in Great Britain. British school, university and sailing club teams usually team race more than they fleet race. National teams from Ireland, Canada, Germany, Holland and elsewhere are also forming for the first IYRU World Team Racing Championship scheduled to be held in August ‘95 in Great Britain.

Gary Bodie coached the Naval Academy sailing team for 10 years, is an avid 505 sailor and chairman of US SAILING’s U.S. Team Race Championship Committee. Ken Legler coaches the Tufts University team during the school year and runs the Wisconsin YC Sailing Program in the summer. As a U. Rhode Island sailor Legler helped his team win the ’77 dinghy and team racing championships. More recently, he was the on-the-water commentator for the '94 Columbus Cup.
Starts — Laying a Foundation

There are several approaches to starting. Some teams use geographic starts, where each team member is assigned to control a particular segment of the line. Others prefer to pair up with opponents and match race, some combine the two techniques, and some approach the start as a free-for-all with each boat starting as if it were in a fleet race.

**GEOGRAPHIC**

Geographic starts are very popular. Regardless of how you get there, spreading your team’s boats down the line is vital. The purpose of this lateral spread is to avoid having your boats bunched at one end, or the opponents bunched up at the other end. This seems contradictory — what you do not want for your team, you also do not want for the other team. How can it be bad for both teams? When a team has two boats at one end of the line, they are in a position to move into a 1-2 on the first windshift, but if they have two boats at one end, the other team has two or three boats at the other end. If your team guessed correctly on the first shift, great; but if you guessed wrong, too bad. It generally pays to set up conservatively enough that you “never lose on a windshift” (see diagrams). Sure, you may lose first place on the windshift, but you want to in at least a 2-4 if you’re completely wrong on the windshift. Then you can team race back to a winning combination.

Winning the ends of the starting line is much more important than in fleet racing, because when you win an end, you subsequently control that side of the first beat. Fighting for an end in fleet racing is risky, because you may have a 1 in 10 chance of winning it, and if you fail, you’re stuffed. However, there are only six boats on the line in team racing, and two of them are trying to help you, so it is worth the risk. Starting close to leeward of an opponent is always an advantage, just like in match racing. Navy usually assigns the strongest, most aggressive starter to the pin. A boat that can point, hold its lane and never, ever get squeezed out by a leeward opponent is especially effective in the middle, and the player starting at the committee boat needs to realize that it’s OK to have one opponent to windward, if that opponent is forced into a late, barging start. Brown University and the James Gang popularized the tactic of hailing “incoming” whenever an opponent was tacking out of the middle line to clear their air. Then the windward teammate, if he was free to tack, would tack right on the incoming boat, controlling the boat and the right side of the beat.

**MATCH-RACE**

Some teams aggressively pair up with opponents before the start, trying to drive them away from the line with match racing tactics. Possible reasons for employing this strategy include drawing fouls, intimidating opponents, and gaining an advantage at the start. This can lead to frequent pre-start rules infractions and protests, but remember, winning by protest is no fun.

Gaining control of all three pairs is very difficult, and even if you do, it is almost impossible to then carefully coordinate three pairs returning to the line, and create a 1-2-3 start. The best you can realistically hope for is to win two of three pairs, and thereby start with either a 1-3-x or a 2-3-x. This is an excellent approach for a strong team-racing team to negate a minor speed deficit. If you’re a little slow, the last thing you want to do is line up all six boats at the gun and drag race for two minutes. Navy generally match races until the last 30 seconds and then disengages and goes for a geographic start with all three boats on the line. Each of the three boats has an assignment of windward, middle, or leeward, but they’re free to switch off among themselves.

Why bother to match race at all if you’re not going to draw fouls and you’re going to disengage anyway? Bodie explains: “It’s something to do to fill up the dead time. Navy used to sit around and wait for the other team to make a move. If they wanted to match race, we’d match race, but if they didn’t want to engage, then we’d fleet race start. The problem with that plan was we had to practice two starting strategies, and we lost the initiative. By match racing all the time, we only had to practice one strategy, we forced the other team to play our game and, if the other team had worked out an elaborate starting maneuver, we wrecked their plans because they had to deal with our tailing. We had the initiative and the tailing was intimidating. It also filled up a minute and a half of dead time, keeping us busy and making us less likely to fail for some silly foul.”

The Tufts’ strategy for starting, on the other hand, is developed by the individual skippers together depending upon their styles. One that works particularly well is for each boat to avoid match racing until the last 30 seconds, then engage just the boat headed for their assigned geographical position on the line. The ideal positioning for the team includes boats split up along the line, that start on time (with the opponents late if possible) and either close to leeward of an opponent or to windward of an opponent with at least a boatlength of separation.

Team race starting plans, like team racing playbooks, are generally not fully developed. Some teams have highly orchestrated approaches to winning the start, but no one executes them with any degree of reliability.
Move/Countermove — The Final Beat

SITUATION
Gary’s team is winning the race with a 1-4-5, but the combination is unstable. Ken’s team has a 2-3-6.

1. Ken —
With all the boats on the final beat, my boats in 2nd and 3rd put a tight cover on 4th and 5th, trying to push them both back evenly, on the same ladder rung, to 6th.

OBJECT
Move 6th out of last.

2. Gary —
Not so fast Ken! Before your boats accomplish their goal, my 5th-place boat drops down hard on 6th to keep your boat in last.

3. Ken —
If 5th pounds 6th, then my boat in 3rd will pound 5th, trying to spring 6th free.

4. Gary —
Now you’re in trouble, Ken! You’ve unbalanced the pairs. Now my boat in 1st will set a pick on 2nd so 4th can be sprung into the lead.

RESULT
Stable winning combination (1-2-5) for Gary. RACE OVER!
**3b Ken —**
In that case, instead of 3rd covering 5th, 3rd double-teams 4th.

**GOAL**
Center the action and bring the pairs back to 6th more quickly.

**5**
**Ken —**
When the players are condensed, one of my boats will break off and return to covering 5th.

**OBJECT**
Ken wants a 2-3-5. If he doesn’t get this, he’ll remain in 2-3-6 or, at worst, drop to 2-4-6. But, now the boats are tightly bunched and Ken has opportunities for passbacks.

**4b Gary —**
If Ken is gonna gang up on my 4th-place boat then I’m going to try to double up my 4th and 5th on his last-place boat.

**6**
**Gary —**
Yes, but I’ve got one more boat to bring into this equation. My boat in 1st will reach down and try to passback 3rd before 3rd passes back 5th.

**THE TRICK**
Execution. With four boats in the group, Ken’s boat in 3rd is also trying to passback Gary’s boat in 5th and the outcome will come down to who executes faster...

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**IF KEN’S BOAT EXECUTES FIRST AND**
- the wind shifts right, Ken’s team wins with a 2-3-5
- the wind shifts left, Ken’s team wins with a 1-4-5.

**IF GARY’S BOAT EXECUTES FIRST AND**
- the wind shifts right, Gary’s team wins with a 1-2-X
- the wind shifts left, Gary’s team wins with a 2-3-4.

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