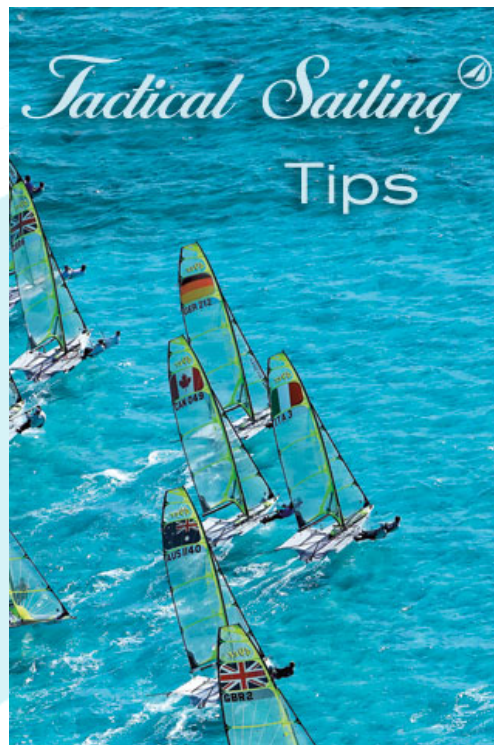


This document is part of the App -Type

**Sailing Tips / Tactical Sailing Tips / Rules of Sailing Tips**

for iPad, Tablet-PC as well as iPhone and Smart Phone



The main purpose of this app is to visualize the paths sailed for tactical maneuvers, basic Right of Way Rules, speed of boats, position of sails, as well as direction and strength of wind in each situation. Depending on the app type, the number of scenes in Main menu is different. Following text is an extension to the tips and their simulated scenes, which you should watch on your iPad, iPhone or Tablet-PC, Smart Phone. The app "Tactical Sailing Tips" is a selection of important sailing tips for beginners and more advanced sailors going to race. The first **three tips are with sound**, the others are without sound, this is not a fault, it is because of memory allocation restrictions of Apple iTunes (< 150 MB). Therefore this text is a useful extension for iPhone and Smart Phone because of its small font size.

These tips - and further 40 tips - are part of a game: "Tactical Sailing - A Game Against the Wind" and "Boat Against Boat" and "Coach's Toolbox". If you want to have fun with a powerful Tactic and Strategy game, see a demo for free and order it on our website: [www.Tacticalsailing.com](http://www.Tacticalsailing.com) - runs on Mac and PC. Keep in touch with other Tactical Sailors and Coaches, see News and Info online. © Photo front page: Fried Elliott.

<b>Tactical Sailing Tips</b>
Tactical Sailing Tips are part of a game: "Tactical Sailing - A Game Against the Wind" and "Boat Against Boat" and "Coach's Toolbox".
<b>Introduction</b>
Our main topic, optimally using the wind, can be clearly illustrated using the tips. Strategic and tactical possibilities can also be clearly explained through the use of simulations.
<b>Strategy and Tactics</b>
There is one thing we know for sure: the wind is constantly changing. With this tips we make the invisible monster "wind" visible through its direction and its strength. This way it is easier to learn to use its power to our advantage. The strategically and tactical possibilities to use the wind are made very clear using the tips. Strategy means: making a plan about how we will act in order to reach our goal, to have an over view about the wind relationships, to show wind formations, and alternatively to take into account possible actions to changes in sequence. Tactics mean: in the concrete game or regatta situation constantly to test if the goal is still attainable or not, and to react immediately and spontaneously to expected situations or unpredictable changes. Strategy and tactics are closely connected and influence each other. For this reason sailing is a tactical game against the wind.
<b>Invisible Monster "Wind"</b>
We present the invisible monster "wind" and his characteristic of changes in these tips. The wind engine regions are completely visible. The entire race area is available for your exercises. You can see wind direction any time so that you have unlimited possibilities to simulate different wind conditions, like shifting and oscillating, headers and lifts, long and short legs as well as lay lines. All the lines are automatically adjusted according to changes in the wind.
The special characteristics of the different boat types (Opti, Laser, 420er, 470er, 29er, 49er, Yachts etc. ) are simulated. The program shows the potential speed in a 360° circle polar diagram and uses tacking and jibbing angles to sail across the race are. Determine boat speed and height according to necessity. You can discuss the starting line bias, long and short legs, lay lines as examples of taking the wind from the best side and illustrate tactical rules.
<b>Right of Way Rule</b>
The definition of basics of Right of Way (ISAF Rules) is based in many cases on wind direction and your position towards wind, e.g. "... windward boat shall keep clear of a leeward boat". When you're sailing, it's always good to know the rules a little better than the boats around you, and this animations will help give you that advantage!
<b>Conclusion</b>
You can start the boats sailing, pause simulation, learn the tactical tips on changing wind conditions, continue sailing- and explain which rule should be applied. You get several scenes to learn Right of Way Rules and see a complete Regatta simulation to play with and to gain knowledge about tactical sailing against - or with the - wind.

## Tactical Tips

### Sail the longer Tack first

"You always have a choice of two tacks: port or starboard. To maintain tactical wind shifts, you should sail the longer one first. This is the tack on which your bow is pointed closer to the mark; it's also the tack that takes you away from the nearest layline. By heading toward the middle, you have a better chance to play the next shift. If you sail the shorter tack first you get to a layline sooner, which limits your options.

Remember: Sail the longer tack first!" [41]

### Stay near the middle

"If the wind stays constant, it does not matter which tack or jibe you sail first. But when you're not sure how wind will change, your best chance is staying near the middle of the course where you can play a wind shift in either direction. One way to stay near the middle is by sailing the long leg first since the short leg usually brings you to a lay line sooner. This won't get you to the mark faster by itself, but it will keep you in a better position to take advantage of future shifts.

Remember: Stay in the middle![95]"

### Shoot finish line

"You can often catch a lot of boats if you keep pushing all the way to the finish. One end of the line is almost always favored, and that's where you should finish. Make your final approach about a boat length or so below the lay line to this favored end, and then 'shoot' the finish by luffing up head to wind so your momentum carries you across the line.

Remember: Always 'shoot' the finish line![91]"

Speed
360° directions
The special characteristics of an Opti is simulated and determines boat speed and height according to necessity. The program shows the potential speed in a 360° circle polar diagram and uses tacking and jibbing angles to sail across the race are.
"Speed varies relatively(%), e.g.: upwind 59%, fastest on a beam reach max. 100%! "
Spinnaker
"Explain Speed Up-, downwind and reaching
Speed varies relatively(%), eg: fastest on a reach max. 100%, downwind 82% / 75%, upwind 60%. Each boat type 'Dinghy' has different values in % at certain angles, eg.: 90°, 165° / 180°, 45°!"
Gennaker
Explain Speed downwind:
"Go fast first, then down. So in order to point down you must start by going faster."
"The ability to point lower is great for tactics, strategy and speed, but you can't just aim your boat down to the wind. Pointing down ability is closely tied to speed, so in order to point lower you must start by going fast. The red boat is moving at max. Speed in this example in direction to 150° and thereafter to 210°!"
Down wind
Explain Speed downwind:
"Go fast first, then down. So in order to point down you must start by going faster."
"The ability to point lower is great for tactics, strategy and speed, but you can't just aim your boat down to the wind. Pointing down ability is closely tied to speed, so in order to point lower you must start by going fast. The red boat is moving at max. Speed in this example in direction to 150°! [PG 201]"

Basics of Right of Way Rules*: Wind from ...
Wind from Starboard or Port?
<p>Definition tack, starboard and port A boat is sailing on either tack - starboard or port. A boat is on the tack, starboard or port, corresponding to her windward side."</p>
Right of Way or Keep Clear? (Rules 10,11,12,13)
<p>This animation should help you to discuss with your crew the Right of Way rules in several situations, it shows, which boat has to "Keep Clear". Two coach boats sailing windward and meet other boats. Following boats must keep clear: - pink Finn coach boat and pink 420er. When boats are on opposite tacks, a port-tack boat shall keep clear of a starboard-tack boat [Rule 10] - grey Laser and pink 420er. When boats are on the same tack and overlapped, a windward boat shall keep clear of a leeward boat [Rule 11]. - pink Finn coach boat. When boats are on opposite tacks, a port-tack boat shall keep clear of a starboard-tack boat [Rule 10]." - discuss the situation of all other boats - yachts or dinghies - have either Right of Way or have to Keep Clear [Rules 12, 13]. The other boats are sailing a predefined course, getting very close, but tack or jibe to avoid contact. You can select the option: 'Pause' the video, when boats are nearly to hit.</p>
1. Wind on opposite tacks - [Rule 10]
Up wind
"When boats are on opposite tacks, a port-tack boat shall keep clear of a starboard-tack boat. [Rule 10]. Definition keep clear: One boat keeps clear of another if the other can sail her course with no need to take avoiding action."
Down wind
"When boats are on opposite tacks, a port-tack boat shall keep clear of a starboard-tack boat. [Rule 10]. Definition keep clear: One boat keeps clear of another if the other can sail her course with no need to take avoiding action."
Wind from starboard: go on
Boats are on opposite tacks, boats are going to have a collision, starboard-tack boats have right of way to go on!
"When boats are on opposite tacks, a port-tack boat shall keep clear of a starboard-tack boat.[Rule 10]. Definition keep clear: One boat keeps clear of another if the other can sail her course with no need to take avoiding action."
Wind from port: keep clear I
Boats are on opposite tacks, boats are going to have a collision, a port-tack going up wind has NO right of way to and must keep clear!
"When boats are on opposite tacks, a port-tack boat shall keep clear of a starboard-tack boat.[Rule 10]. Definition keep clear: One boat keeps clear of another if the other can sail her course with no need to take avoiding action."
Wind from port: keep clear II
Boats are on opposite tacks, boats are going to have a collision, a port-tack going down wind has NO right of way to and must keep clear!
"When boats are on opposite tacks, a port-tack boat shall keep clear of a starboard-tack boat.[Rule 10]. Definition keep clear: One boat keeps clear of another if the other can sail her course with no need to take avoiding action."

2. Wind on same tack [Rule 11, 12]
Windward boats: keep clear
When boats are on the same tack and overlapped, all windward boats shall keep clear of a leeward boat.[Rule 11]"
Clear astern: keep clear
"When boats are on the same tack and not overlapped, a boat clear astern shall keep clear of a boat clear ahead. [Rule 12]. Definition Clear Astern, Clear Ahead and Overlap: One boat is clear ahead of another when her hull and equipment in normal position are behind a line abeam from the aftermost point of the other boat's hull and equipment in normal position. They overlap when neither is clear astern."
3. Avoid contact whilst tacking [Rule 13]
Keep clear
"After a boat passes head to wind, she shall keep clear of other boats until she is on a close-hauled course. During that time rules 10,11 and 12 do not apply. [Rule 13]." If two boats are subject to this rule at the same time, the one on the others port side or the one astern shall keep clear [Rule 13]. Definition keep clear: A boat keeps clear of a right-of-way boat (a) if the right-of-way boat can sail her course with no need to take avoiding action and, (b) when the boats are overlapped, if the right-of-way boat can also change course in both directions without immediately making contact."
* Legal Note: The Right of Way Rules are based on the definition of World Sailing / ISAF. The animations are part of the computer game "Tactical Sailing - Boat Against Boat". They are made for the purpose of personal playing and learning. Any liability and legal action excluded.

## The Game Tactical Sailing for Mac OS X 10.6 and higher

The game is design for Mac, Mac Pro, Mac Book Air, running OS X 10.6 or higher, the game software requires "Java Standard Edition" to run. Java is **not** available on iOS devices like iPad, so we cannot offer the game, we have a restriction to run these tips as videos on iOS only.

But these tips - and further 40 tips - are part of a PC/MAC game: "Tactical Sailing - A Game Against the Wind" and "Boat Against Boat" and "Coach's Toolbox". If you want to have fun with a powerful Tactic and Strategy game, **see a demo for free** and order it on our website: [www.Tacticalsailing.com](http://www.Tacticalsailing.com) - runs on Mac and PC. Keep in touch with other Tactical Sailors and Coaches, see News and Information from Coaches online.

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These animations require TacticalSailing program version 1.131.123 or higher

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