Play to sail to have fun, to learn and to race.

Improve your skills fast.

This RADIO SAILING MINI-MANUAL is dedicated to
everyone who wants to begin the fun of learning
how to use the wind to "power" his rc yacht

Radio Sailing **Academy**

Play2Sail™

PLAYTOSAIL.COM

TO HAVE **FUN**, TO **LEARN** AND TO **RACE**

To start steering a radio-controlled sailboat is easy
but at Play2Sail we like to say also that: "to play is to learn".

Here you find useful resources - some really simple basics and tips of sailing -
to learn a lot very quickly and get the most of the enjoyment on the water.

YOU CAN ALSO PRINT THE THEMATIC CHAPTERS OF THE MANUAL INTO HANDY SHEETS.

www.dockstahavet.se

"Can I steer a radio-controlled sailboat if I have never sailed before?"

Yes, even if you are a complete beginner, there is a lot of fun to "drive" on the water a radio-controlled yachts: it’s really easy to steer and you will improve your skills fast.

No age is too young or too old to start to race and to enjoy the pleasure of radio yachting. Radio sailing is guaranteed pleasure of boating. For Sailors of any skill level, it is one of the most fun pastimes by the seaside.

New to radio sailing?

This RADIO SAILING MINI-MANUAL is suitable for novices and first-timers that want to discover a smart way of learning to sail. It aims to make the sport of yachting smart: from learning the basic, to perfect sailing skills or to race.

CONTENTS:

Check the direction of the wind first

To start the radio-controlled yachting is easy but at Play2Sail we like to say also that: "to play is to learn", so here we share **4 easy ways to check the direction of the wind while steering your sailboat**: some really simple basics and tips of sailing, dedicated to everyone who wants to begin the fun of learning how to use the wind to "power" his sailboat - small or big - and get the most of the enjoyment on the water.

The wind powers your sails, that are the “engine” to move your sailboat: in a sailboat the force generated by the wind is harnessed into forward drive.

A sailor need to know the wind direction to manage to capture it properly, acting on the sails position and acting on the steer, to direct the hull (in the right point of sail).

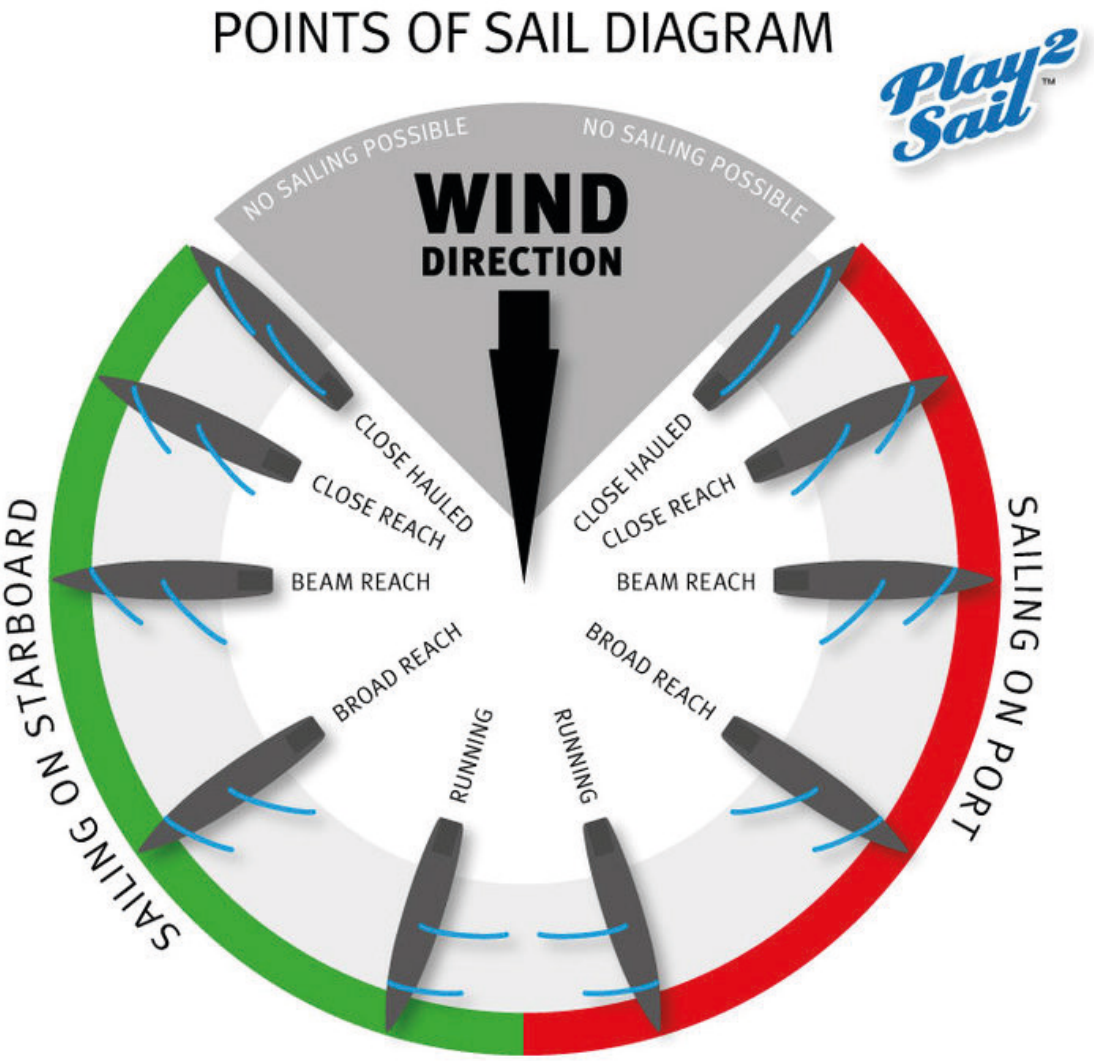
1) **Look around and see clues to the wind’s direction**: look at surrounding flags, smoke, moving clouds or meteorological weather stations nearby.

2) **Look at the ripulse flow over the water surface.** They are formed by the wind pushing the water and breaking its surface. The ripples flow in the direction of the wind.

3) **Simply to feel the direction of the wind using your body**, your face / head or just by wetting a finger and pointing it upwards (the side of the that feels "cool" is approximately the direction from which the wind is blowing).

4) **Look for sailboats**, how they set the sails or, if moored, look at the top of their masts: in which direction is the narrow side of their Windex wheather vanes pointing?

You can’t direct the Wind but you can adjust the Sails



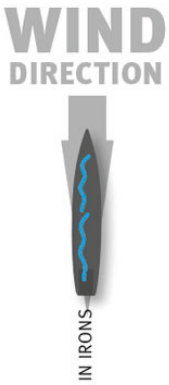
Use wind & sails to move a boat to the direction needed

Sailors harness the wind to move their boats, adjusting (trimming) the sails to keep air flowing over the sail to provide power. In a sailboat this force is harnessed into forward drive. The curve of the sails (as in an airplane's wing) generates lift, that force, in combination with the effect of the keel, results in the boat being pulled forward.

First it's important to understand that your boat can't sail straight into the wind.

When the bow of your boat (the front side of the hull) is pointed directly into the wind, the wind only shakes the sails (imagine a flag flying) and it provides no driving force.

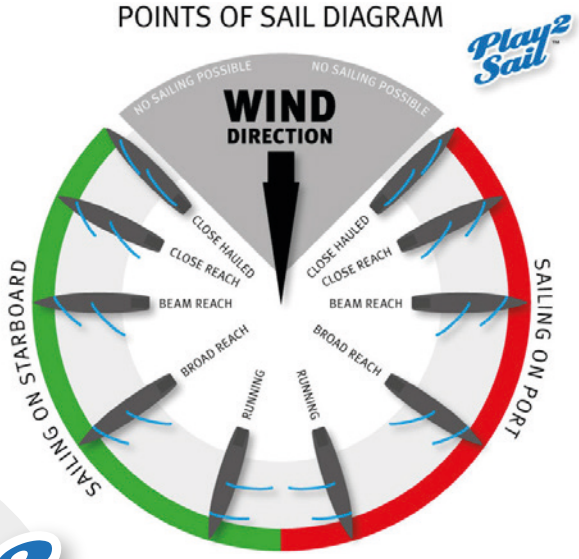
The "no-go zone" for your boat - where a sail is unable to motive power from the wind - extends 45° on either side of the wind direction.



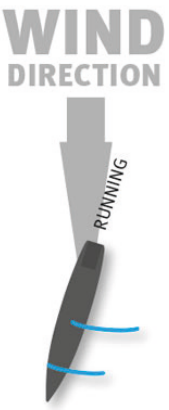
In order to harness this power into forward drive, **the sails must intersect and be kept into the wind at an angle**.

Sail trimming allows you to manage the sails at the proper angle in relation at the direction of the wind and the point of sail.

The **points of sails diagram** shows you how to most efficiently use the power of wind on the sails of your boat in motion toward a certain direction.
You learn that the name of your route changes in relation of the wind: **the points of sails are defined by the angle of the wind coming over the boat relative to the bow**.
Imagine to be on your boat, looking straight ahead at the bow (would be looking towards the top of the diagram: at 12 o'clock).
The following diagram shows the basic POINTS OF SAIL for different boat directions relative to the wind (blowing from the top of the diagram).



- **WIND COMING FROM 180°**



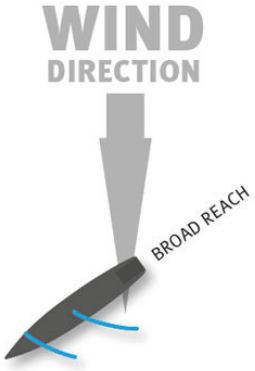
Running downwind (point of sail) points your boat straight in the same direction as the wind: the wind is intersecting your boat at a relative bearing of 6 o'clock (around 180° from the bow).

SAILS RIGHT ANGLE: LETTING BOTH OUT TO THEIR MAXIMUM POSITION - Let mainsail and jib eased out on opposite sides of the boat (as into the image above), as much as possible from the centerline of the boat, to expose the maximum surface of sails to capture the wind coming from back.

- **WIND COMING FROM 120/240°**

Broad Reach (point of sail): the wind blows over the

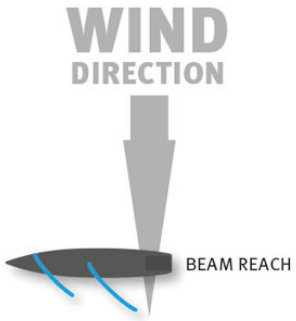
boat's quarter, between the beam and the stern. The sailing is heading you far off the wind (but not quite directly downwind): a bit further upwind, 135° off the wind.



A broad reach is faster rather than a point of sailing directly downwind since mainsail and jib receive more pressure from the wind.

SAILS RIGHT ANGLE: LET YOUR SAILS OUT A BIT LESS.

• WIND COMING FROM 90/270°

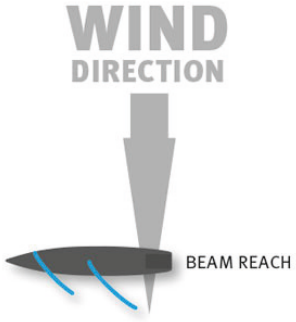


Beam Reach (point of sail) moves your boat at the fastest speed: the wind blows on the side of your boat.

SAILS RIGHT ANGLE: LET YOUR SAILS OUT HALF WAY (EACH AT A POSITION OF 45°).

• WIND COMING FROM 60/300°

Close Reach (point of sail): here you sail with the wind forward of the beam: it reaches your boat with a relative bearing of 2 o'clock or 10 o'clock.



SAILS RIGHT ANGLE: PULLING BOTH IN A LITTLE
Let the sails out until they flap then bring them in just to the point on no longer luffing. They are let out farther than when close hauled.

• WIND COMING FROM 45/135°

Close Hauled or Beating (point of sail) to windward involves tacking your boat through about 90 degrees from close hauled to close hauled through the no-go zone (since about 40/45 degrees off the wind is about as close as you can sailing upwind).

SAILS RIGHT ANGLE: KEEPING PULLED IN
The mainsail and the jib are pulled in tight, and the boom is centered down the centerline of the boat.

4 key basic actions to master steering your radio-controlled sailboat

You need to master (knowing & practicing) the basic actions of steering to properly handle your sailboat; this involves to direct, move, accelerate, change direction, stop, luff or bear away.

When sailing, the route of your boat is usually headed towards your destination or towards a mark of the course when racing. **Steering towards a point** - acting on the rudder by moving to left or right the joystick positioned on the left side of the controller unit - **would be the first step followed by adjusting the sails** - gently pushing up or down the stick positioned on the left - to maintain good boat speed in relation to the direction of the wind.

With the combined effects of the sails, the hull may be steered in any direction in relation to the wind. Just remember that your acting on the rudder will bring very different consequences to the movement of the boat.

1. Steering toward the wind
To turn the bow of the hull toward the wind is **called "heading up" or "luffing up"**.
As you steer more toward the wind direction, you have to pull your sails in, "sheeting in", pushing down the left stick on the radio controller. You trim the sails in tighter to keep them full and keep generating lift.

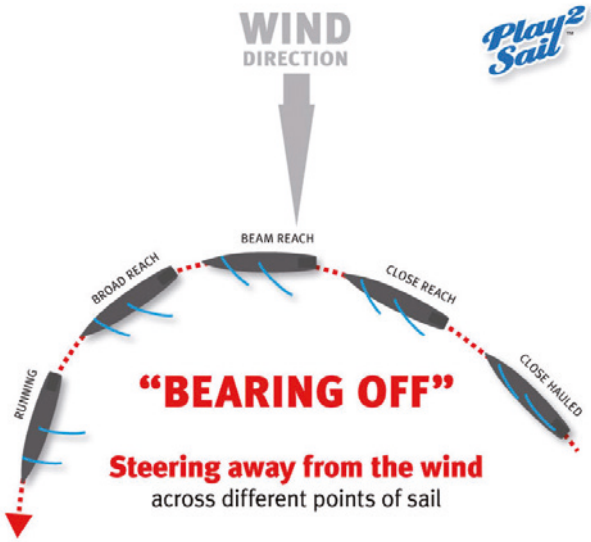
You need to heading up in many situations, here you find some examples:
- **To start sailing a route more close to the wind direction**. Like turning closer to the wind to change your point of sail from broad reach to close hauled, when you cross the starting line after the signal.
- **To start luffing to engage a boat you're close**.
- **To keep a route more close to the wind** when you have to reach a point slightly windward of your route. For example, the mark at the end of your starboard layline.
- **To anticipate a veered puff** of wind when beating.
- **To accelerate running downwind**.
- **To "protect" your position on wind**, when reaching or running downwind, from a boat that is close to you, backward.
- **To point the hull into the wind direction**, luffing the sails, reducing your speed such as when approaching a dock or an obstacle.
- **To stop the boat keeping it "in iron" (stopped headed into the wind)**. A sailboat does not have brakes. The easiest way to stop it is to turn the bow and to keep it headed into the wind direction, and to lower the sails.
- **To start your tacking** to windward, changing your direction from a close hauled course to the opposite one passing your bow across the direction of the wind.
- **To round the downwind mark** keeping a close hauled point of sail beating the next windward leg.

Steering toward the wind
across different points of sail

2. Steering away from the wind
To turn the bow of the hull away from the wind is called "bearing away", "bearing off" or "heading downwind".
You need to let the sails out, "ease the sheets", gently pushing up the left stick of the radio controller.

You need to bear off in many situations, here you find some examples:
- **To anticipate a backed puff** of wind when running downwind.

• **To accelerate your boat into a lull** of wind, or after a tack when beating.
• **To accelerate your boat into a puff** when reaching.
• **To change the direction** (from your close hauled route) when you need to pass astern a starboard opponent boat.
• **To bear away rounding the windward mark**.



3. Tacking the boat

Tacking your boat refers to turning the bow through the wind so that the wind changes to intersect the sails from one side of the boat to the other side.

The boom (of the mainsail and of the jib in your radio sailboat) will shift from one side to the other when tacking.
A sailboat cannot sail directly into the wind direction due to a conical "no-go zone" of about 45+45 degrees from the direction which the wind is blowing. Tacking is the action you need to practice to get your sailboat to a point that is positioned directly upwind.

Remember, you must **turn the boat at least 90 degrees when tacking** or you may stall in the wind (put yourself "in irons"). Try to carve a smooth arc in the water, moving the rudder joystick firmly, but avoid sudden, jerky moves.

Ideally you steer the hull to go smoothly from sailing close hauled on one tack to sailing close hauled on the other tack.

4. Jibing the boat

The opposite of tacking, this basic sailing maneuver refers to turning the stern of the boat through the wind so that the wind changes from one side of the boat to the other side.

Turning away from the wind, or jibing is a way to change your course while sailing downwind.
When performing a jibe, the mainsail boom of your boat will always shift from one side to the other.

Play to sail to have fun, to learn and to race

To start steering a radio-controlled sailboat is easy but at Play2Sail we like to say also that: "to play is to learn", so we share some really simple basics and tips, dedicated to everyone who wants to begin the fun of learning how to use the wind to "power" his rc yacht.

Trimming to make your radio-controlled sailboat run fast

If you like to start from the basics of sailing, here you approach **how to trim the sails of your radio-controlled yacht while steering**. Precise and timely trimming the sails will make your boat move at the speed you need: it will be easier to steer and your sailboat will race faster.

How the sails work.

The mainsail and the jib are the “engine” of your boat: thanks to the action of the wind, they act as wings to “produce” power to move the hull.

As wings, the sails have shapes with curved sections. The wind flows at different speeds over both sides of the sail, creating a depression that “pulls” the boat forward.

During a close hauled point of sail, the forces that are generated act as a “lift” that moves the hull upwind. Otherwise, when sailing downwind the wind pushes against the sails from behind and simply shoves the boat forward.

Sail trimming is critical for your boat speed.

A sailboat can’t move if the sails are loose and flapping in the wind. As soon as they are tightened up, the boat is starting to move forward.

Trimming is to move the angle of the sails so that they catch the wind with the maximum efficiency.

First, you must constantly be aware of the wind direction. Second you start to position the angle of the sails and to trim them accordingly.

A basic criteria to properly trim the sails, no matter what course your radio yacht is sailing, is to ease the sails out until they begin to luff. Next, pull them in until the luffing stops.
In order to maintain the sails effective, you must keep a smooth air flow over both sides of the sail with no luffing.
Anyway, by practicing it will be “automatic” to know how to set the sails in relation of the direction of the wind.

Any “point of sail” that your boat is keeping involves an appropriate position of the sails.

Even if your boat cannot sail pointing directly into the wind direction (in the no-go zone, the sail will luff, or flap like a flag in the breeze), it will be easy to properly set the sails when the hull is at an angle greater than 35/45 degrees from the wind.

- **On a close-hauled course** the sails are “in tight” (at only a slight angle to the center line of the hull).
- **On a run** (sailing away from the wind), the sails should be all the way out: you need them to be perpendicular to the direction of the wind to expose the maximum amount of sails area, ideally by keeping the booms quite perpendicular to the center line of the hull.
- **Reaching**, or sailing roughly perpendicular to the wind direction, has a sail position about halfway between close-hauled and a run.

If you change direction or point of sail or if it’s the wind direction that shifts, **you must properly re-trim the position of the sails all the time.**

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TO HAVE **FUN**, *TO* **LEARN** *AND TO* **RACE**

30 common sayings of basic yachting terminology

Sailors have been developed specific languages: it's fun because you can recognize a racing sailor or a cruiser not only by how they dress but above all by how they speak! So, to express yourself at best on board or on the dock, from the beginning start to master the right words.

- **BOW** - The front of the boat.
- **STERN** - The back of the boat (the stern is also known as the aft).
- **HULL** - The body of the boat.
- **DECK** - The upper surface of the hull.
- **KEEL** - A weighted blade that protrudes from the bottom of the hull as a means of providing lateral stability.
- **RUDDER** - The hinged vertical blade mounted at the stern used as a steering device.
- **MAST** - Vertical spar (a pole) that supports sails or rigging.
- **BOOM** - It's the horizontal pole which extends from the bottom of the mast. A radio-controlled sailboat has a jib boom and a mainsail boom that are adjusted in relation of the direction of the wind to harness its power in order to move the hull forward.
- **MAINSAIL** - It is the big sail located behind the mast of a sailboat.
- **JIB** - The triangular sail at the front of a sailboat.
- **HALYARD** - A line used to raise the head of any sail.
- **SHEET** - A rope used to control the setting of a sail in relation to the direction of the wind.
- **ROPES** - All cordage, the lines in the rigging.
- **MAINSHEET** - Sail control line that allows to trim the mainsail: it is used to control the angle of the boom, and thereby the mainsail.
- **FORESTAY and BACKSTAY** - Long lines supporting the mast forward and aft, and leading from the head of the mast down to the bow and stern of the vessel.
- **RIG** - the arrangement of mast, sails and spars.

It is also useful to know the difference between the following terms:

- **UPWIND** - When you are going against the wind.
- **DOWNWIND** - When you are going with the wind.
- **PORT** - This is the left side of the boat when viewed from the stern.
- **STARBOARD** - This is the right side of the boat when viewed from the stern.
- **WINDWARD** - The side of the boat the wind hits first. The side from which the wind is currently blowing from.
- **LEEWARD** - The side of the boat the wind hits last: it's the direction opposite to the way the wind is currently blowing.
- **HEADING UP** (luffing up or, simply, luff) - Moving the boat's bow into the wind, or towards the direction it is coming from, to windward.
- **BEARING OFF** (or bearing away) - Moving the boat's bow away from the wind, change the direction to leeward.
- **PUFF** (or gust) - It's simply an increase in breeze, big or small.
- **LULL** - The opposite of a puff: it's a temporary reduction in wind strength/pressure.
- **REAL WIND** (or true wind) - The wind strength and direction affecting a static object: i.e. the wind that a boat that is not moving would experience.
- **APPARENT WIND** - It is how the wind appears on a moving yacht: it is the summation (in direction and velocity) of wind as measured on land and of the wind caused by the boat's own speed.
- **VEER** - A clockwise shift in wind direction.
- **BACK** - A counterclockwise shift in wind direction.
- **LIFT** - A wind shift toward the windward side of the boat.
- **HEADER** - A wind shift toward the leeward side of the boat (opposite to a lift). Helmsman needs to bear away to keep the same wind angle.

Also these few terms to describe how the boat is moving (or how you act to move your sailboat) are important:

- **TACKING** - It refers to turning the bow through the wind so that the wind changes from one side of the boat to the other side. When tacking, the boom will

always shift from one side to the other when performing a tack or a jibe.
• **JIBING** - The opposite of tacking, it's the maneuver to turning the stern of the boat through the wind so that the wind changes from one side of the boat to the other side. Performing the jibing, the mainsail boom will always shift from one side to the other.
• **LUFFING** - Pointing the boat into the wind (sails flapping).
• **IRONS** - The hull of the boat is pointing into the wind, sails are ineffective and flapping.
• **TRIM** - Adjustments made to sails to maximize their efficiency. To deepen, see how to trim the sails.
• **POINT OF SAIL** - The boat's direction relative to the wind.

Few terms related to the courses of sailing racing between marks:

BEAT - the course segment to the windward floating mark at a close-hauled sailing angle.
• **RUN** - The course, sailed at a near dead-downwind sailing angle, between the windward mark and the leeward mark.
• **MARK (or buoy)** - A floating object of defined shape and color, which is anchored and serves as an aid to navigation.

Few terms related to the wind:

• **CLEAR AIR** - Air flow undisturbed by the presence of other boats and their sails.
• **HOLE** - A brief, localized reduction in wind velocity.
• **SHIFT** - A change in wind direction.
• **VEER** - A clockwise shift in wind direction.
• **BACK** - A counterclockwise shift in wind direction.

When radio sailing, the radio unit provides you with control over your sailboat: on the rudder and sail trim.

Sailing requires constant reactions: to control or change the boat's direction in the water and to control the boat speed and fine-tune the angle to the wind, aging on the sails.

Play2Sail provides you a two-stick surface transmitter to control your DF65 radio yacht.

The 2 'sticks' on the radio are two controls.

Vertically moving the one on the left, you trim the sails in and out.

Orizontally moving the stick on the right, you send commands to move the hull's rudder blade to steer the boat into the direction you want.

TIP: **ALWAYS switch on the tx then the boat**, then move the sheeting control up and down and the flashing green lights should go solid and you'll be in control. **ALWAYS switch off the boat then the tx**.

On your rc sailboat are 2 servos, one each receive the signal off the two controls.

The steering servo actuates the rudder, through direct linkages. The other will be hauling in and letting out the ropes that controls the position of the sails. At its shortest length, the sails may only have a few degrees of sway. With the line fully relaxed, the sails could approach 90-degrees of travel.

To use your controller unit to sail your radio yacht is really simple.

- **Turn the hull to the right** by moving the rudder joystick to the right.
- **Turn the hull to the left** by moving the rudder joystick to the left.
- **Pull the sail in** by moving the sail stick down.
- **Ease the sail out** by moving the sail stick up.

By manipulating the controls of the radio unit, you will sail your model from the piers as if it were a full-size yacht.

The distance to which you can sail our model yacht is limited by the range of the radio transmitter and receiver in the control system and by the capability of your eye. Visibility is crucial for sail trimming and steering to provide directional control to the hull (also for avoiding collisions).

We recommend to keep your sailing in the area where the floating marks are placed: from the pier, you will have a full control of your sailboats and, eventually, this will allow the staff to easily support you and your sailboat.

Steering your sailboat using the remote controller commands

[TIPS & TRICKS]

Practice making smooth movements of both rudder joystick and the sail winch stick on your transmitter.

Control the direction of your boat by gently steering. **Avoid any sharp movement of the rudder**. A fast movement of the stick to full lock position will only act as a brake.

When tacking through the wind, make it a smooth and controlled turn which will help you carry boatspeed throughout the entire manoeuvre.

Too fast a turn and you throw off speed; too slow and you lose momentum.

Likewise, when sailing downwind try to keep rudder movements to a minimum to gain maximum boatspeed.

Steering to turn a sailboat in becomes more efficient the faster the boat is going. So when your sailboat is going fast, you can turn the rudder less to achieve the same turning arch. To turn when going slow, keep the rudder over for a longer time.

In light winds, get your speed up - by just bearing down a bit, before to start your tacking, so that the boat doesn't stall halfway through your turn as it faces into the wind.

Fact to remember: you can't steer effectively when your boat is not moving into the water. The rudder needs water to flow over it to be effective. Pay particularly attention at the start or when your boat is "in iron": use the sails to regain momentum and speed.

A good way to practice is to go out when the wind is not too high and practice holding the yacht to a constant angle of heel by using the rudder joystick.

How to leave and return to the pier with a radio-controlled sailboat

Before you start a radio sailing session, it is important to know how to leave the pier and how to come back.

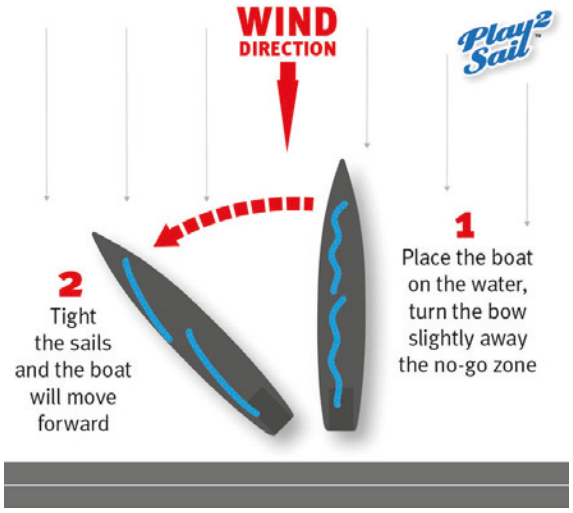
You need to act in relation of the wind (its direction and intensity) at the moment you will place your model yacht on the water. So, check the prevalent wind direction, first.

Our rc sailboats are really light: a DF65 yacht - ready to sail - weights around 1.2 kg only.

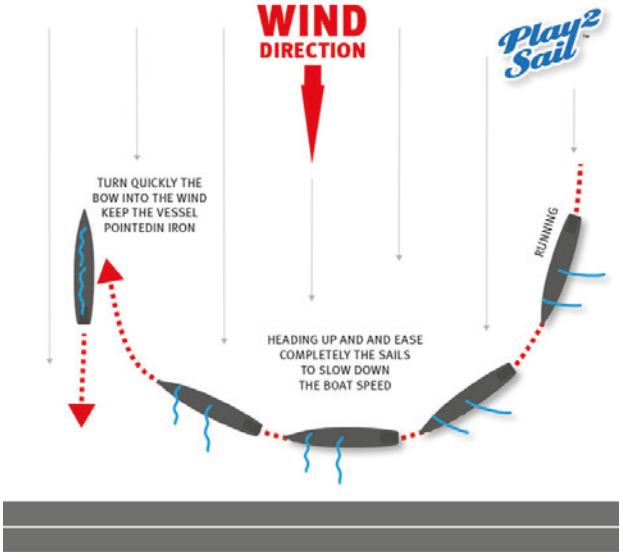
When you handle it out of the water, **remember to grip the boat from the aluminum blade of the keel**.

To avoid it does not suddenly fly away while from your hands, **let the sails go freely and keep the bow of the hull and the sails pointed in the wind** until you will place your boat on the water.

How to leave and return when the pier is downwind.



• **To start from the dock** where the wind comes in front of you, your boat will have to sail upwind. Place it on the water and then turn the bow slightly away the no-go zone, tight in the sails acting on the left joystick of your radio control unit. The wind will start to power the sails and the boat will move forward. Act on the right joystick to control the boat direction by steering. Start to heading off just a bit to accelerate and now your boat will sail away from the pier fully under your control.



• **To return back to the floating wharf**, sail downwind

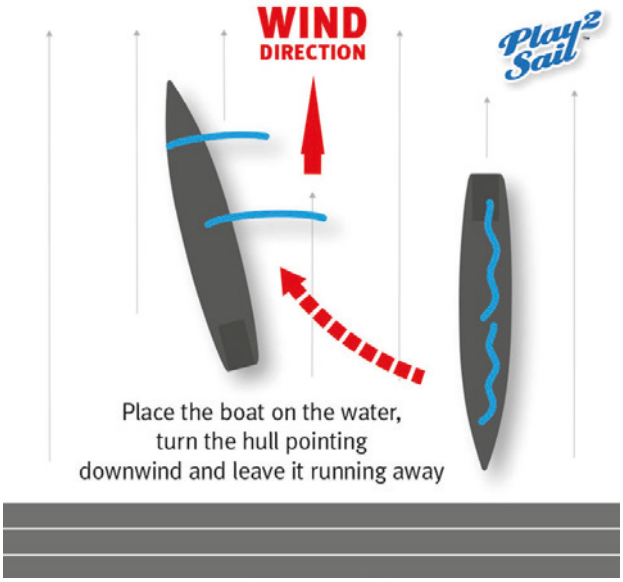
and start a large turn that will keep the boat on a broad reach that points your destination on the pier.

Let go of the sails to slow down the boat speed. Before to be too close to the dock, turn quickly the bow into the wind and ease completely the sails. Keep the vessel pointed into the no-go zone, in iron, with the sails luffing into the wind.

The wind will slowly push back the boat more close to the pier, where it will be easier to take it out of the water. (Remember to keep the bow pointing into the wind, with the. Sails completely released, and to firmly grip the keel in your hand).

HOW STOP YOUR SAILBOAT - When your radioyacht is sailing, you can always stop your model **by just turning the bow into the wind and letting go of the sails** control line. When you do this, the wind pressure is off of the sails and they don't generate push, the boat will stop almost immediately. This also is good for docking when the dock is upwind.

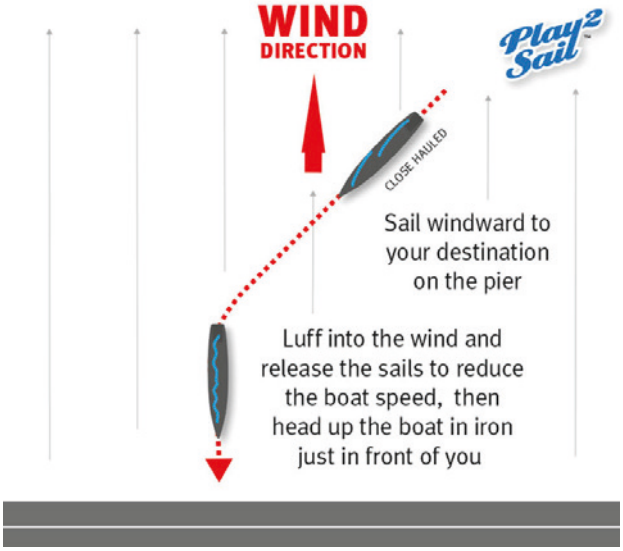
How to leave and return when the pier is upwind



• **Starting from the dock** when the wind comes from your shoulders, your boat will sail away running downwind.

Keeping the bow inline with the direction of the wind and the sails well released. Place the boat on the water, turn the hull pointing downwind and leave it running away with the sails powered by the wind.

• **To return back to the pier** your boat will have to sail windward.



Sail it, point at a slow speed to your destination on the pier. Steer and luff into the wind and release the sails to reduce the boat speed. When you're close to the dock, head up the hull in iron just in front of you, so will be easy to take the boat from the water.

ON THE PIER: KEEP YOUR KIDS SAFE

- LIFE JACKET
- RUBBER-SOLED SHOES
- WATER BOTTLE
- SUNSCREEN PROTECTION

There are 4 different race courses to sail at the Play2Sail Arena

A sailing race may have the purpose to reach a destination or, as per our radio sailing activities at P2S Arena, to race around a set of marks. “Olympic”, “Triangle”, Windward-Leeward” and the “Arena” courses are what we suggest to sailors to enjoy racing their radio yachts at the top of the fun.

A regatta course consists of **a start and finish line and legs** separated by marks.
The sailboats run the legs on different points of sailing in relation to the main wind direction - for a determined number of rounds of the complete course (usually one or two rounds, but sailors at the Play2Sail Arena are free to decide how to set their regatta).

“Olympic”, “Triangle”, Windward-Leeward” and the “Arena” courses: here you find a diagram for every course, that shows the location of the marks and the sequence they must be rounded, plus a short description on how to sail the legs.

For all the courses, **the START is set into the wind**. The starting line is an imaginary straight line (usually about perpendicular to the wind direction) between two marks. So, after the start, the first leg is always towards the direction of the wind: sailboats need beating to windward at a course of about forty-five degrees and tacking to reach the mark upwind.

The diagrams you see on the next page show the racing course set for the prevalent southerly wind at Docksta Havet Base Camp.

ARENA COURSE - Description:

- **START** from the Start/Finish line between the yellow marks
- Sail upwind toward the Windward gate
- Pass into the Windward gate sailing around either the mark 1 or 2
- Sail downwind toward the Leeward gate
- Pass into the Leeward gate sailing around either the mark 4 or 5
- Sail upwind to cross the **FINISH** line

TRIANGLE COURSE - Description:

- Sail upwind toward the Mark 1
- Keep the mark 1 on your left and sail toward mark 3
- Keep the mark 3 on your left and sail toward mark 5, that you will keep to your left to
- Sail upwind and cross the **FINISH** line

WINDWARD/LEEWARD COURSE - Description:

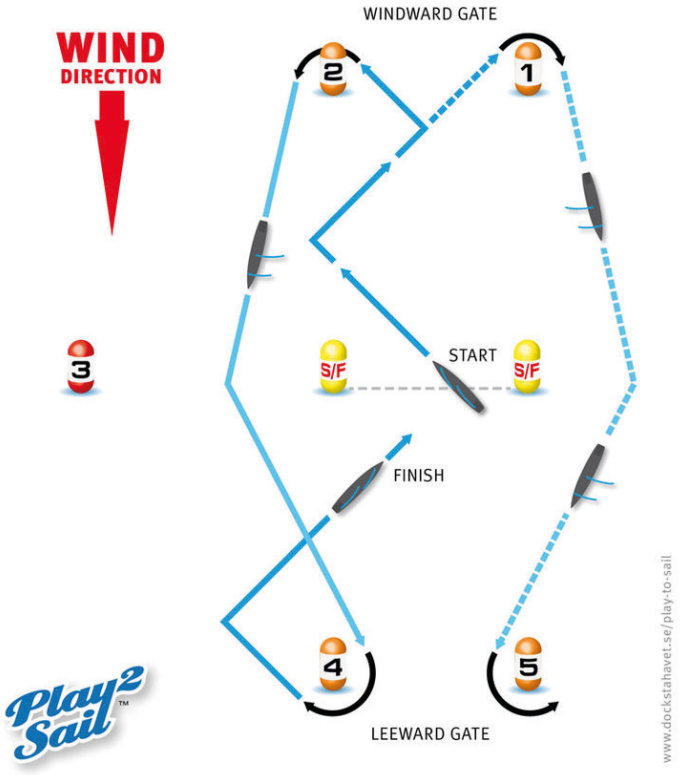
- **START** from the Start/Finish line between the yellow marks
- Sail upwind toward the mark 1
- Keep the mark 1 on your left and sail toward mark 2
- Keep the mark 2 on your left and sail downwind toward the Leeward gate
- Pass into the Leeward gate sailing around either the mark 4 or 5
- Sail upwind to cross the **FINISH** line

WINDWARD/LEEWARD COURSE - Description:

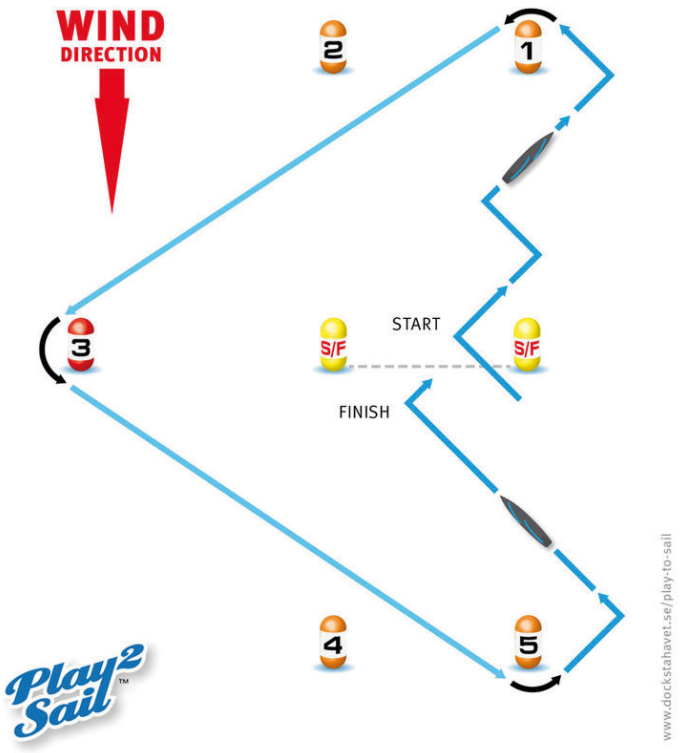
- **START** from the Start/Finish line between the yellow marks
- Sail upwind toward the mark 1
- Keep the mark 1 on your left and sail toward mark 3
- Keep the mark 3 on your left and sail toward the mark 5
- Keep the mark 5 on your left and sail upwind toward the mark 1
- Keep the mark 1 on your left and sail downwind toward the mark 5
- Keep the mark 5 on your left and sail upwind to cross the **FINISH** line

If you like practice your maneuvers or compete against your friends, race or just sailing the provided course rounding the marks is a top fun sailing experience: you will learn a lot, improving your skills in all the conditions.

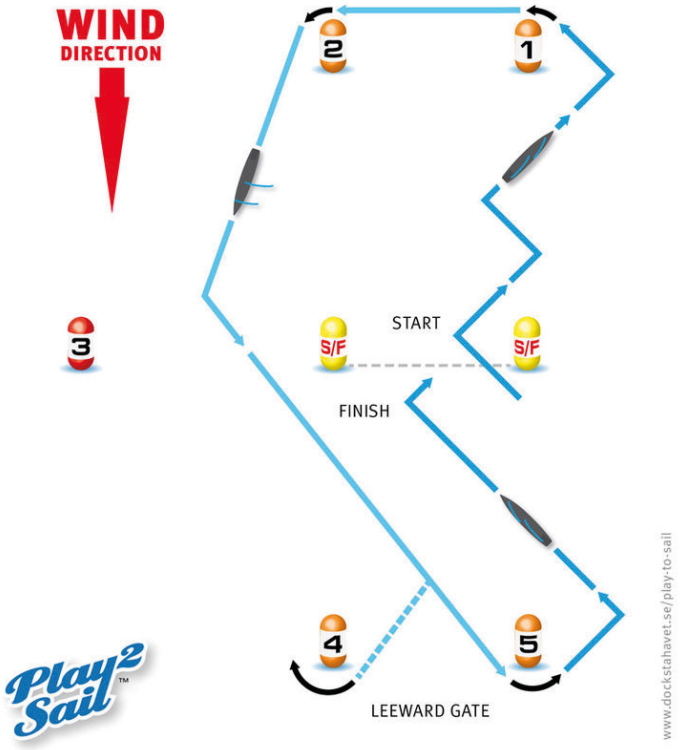
ARENA START - WINDWARD GATE - LEEWARD GATE - FINISH



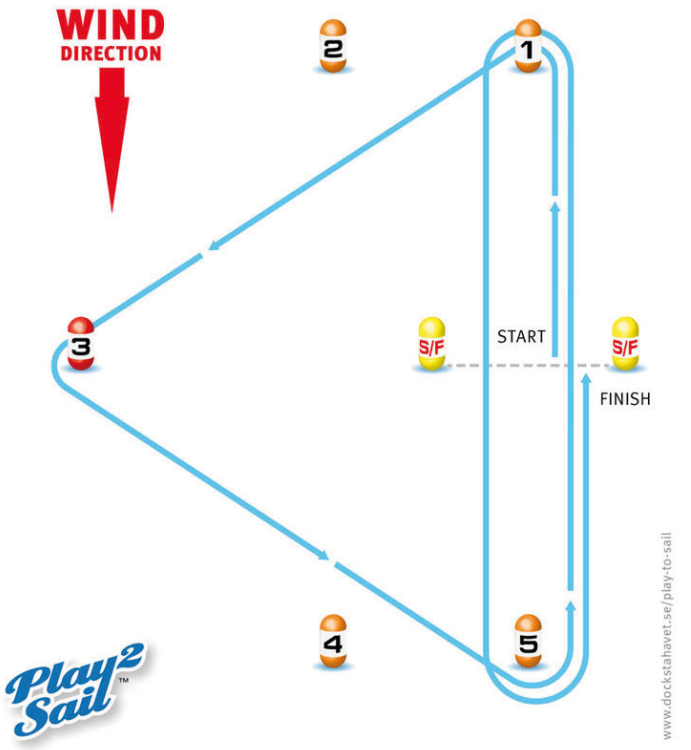
TRIANGLE START - 1 - 3 - 5 - FINISH



WINDWARD/LEEWARD START - 1 - 2 - 4/5 - FINISH



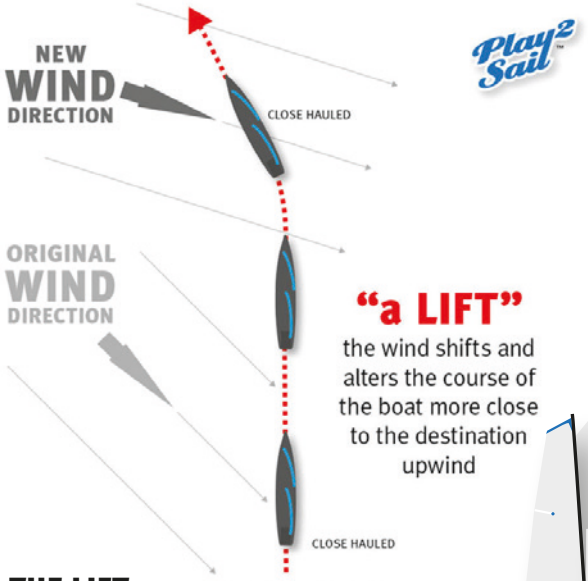
OLYMPIC START - 1 - 3 - 5 - 1 - 5 - FINISH



How best to manage to sail the wind shifts steering your radio sailboat

Yes, it does: the wind shifts. This is important when sailing racing because it creates an opportunity to gain distance on the opponent boats or it will influence your losses. Wind shifts are a main strategic and tactical factor.

Sailors say that a boat can be "headed" or "lifted" because a wind shifts can interfere in different ways on the direction the boat is sailing.



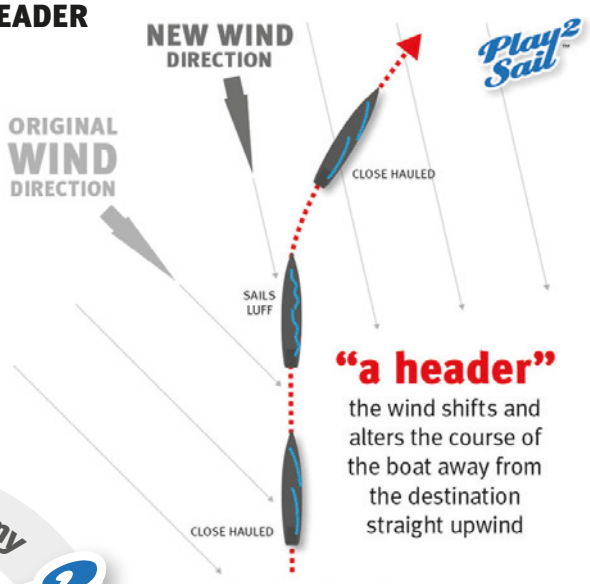
THE LIFT

If your boat is sailing upwind, the wind is lifting when its direction changes shifting from the bow toward the stern.

This usually is a good shift, because your boat will head more upwind: it will allow you to head up few degrees with the lift and to keep a direction more close to the the weather mark while racing.
If you don't need to luff and go higher to point your destination upwind, when your boat encounters a lift, just trim the sails: release a bit them to gain speed mantaining the direction.

When your boat is running downwind, the wind lifts when it changes direction by turning towards the stern.
It is usually a negative shift. If you're mantaining your run dead downwind, a wind lifting will force your sails to gybe, or you will have to head up away from your route to stay on the previous tack.
If your point of sail is a reach, if the wind changes direction lifting, you will have to ease the sails – this means also that your boat will sail slower downwind.

THE HEADER



If your boat is heading upwind, header occurs when the direction of the wind shifts towards the bow.

Encountering a header, the sails of your boat will start to luff. You will have to accommodate for the new wind direction by steering: you need to bear away few degrees your route, so, this means that a header will force you away from your destination straight upwind.

Since a header is a shift that heads your boat more downwind, **you need to tack your sailboat in headers** to sail straight up the course toward the windward mark. If a boat is sailing on a heading tack, **by tacking it will sail in a lift on the opposite tack**.

When your sailboat is running towards a point straight downwind and the wind shifts towards the bow, you will be able to sail at an angle that will point your boat closer to your destination.

At the very least, a header will allow the dead downwind sailor to be sailing on a deep broad reach. If, during a reach, your bow is pointing towards the mark, to trim in the sails is all that's needed with a header.

FOCUS: When radio sailing, you can't rely on the compass or landmarks to determine a wind shift. So, to detect if the direction of the wind is changing, you will relate your position to the other sailboats.
If the direction of the wind is steady, both port or starboard tacks are exactly equal. When a wind shift occurs, one tack becomes more favorable: a header on one tack is automatically a lift on the other.

Look at the opponents boats: how much they are lifted or headed?
In case of differences, consider that one tack becomes more favorable than the other. If you're sailing upwind, a boat lifted sail more closely in the direction of the weather mark than the other boats do.

If the opposite tack your boat is sailing becomes more favorable, you should consider tacking.
Try to sail on this more favorable tack as the wind shifts back in a header, then the opposite tack becomes the more favorable route.

Your goal upwind is to sail each tack when it is lifted. By sailing the lifted tack, your boat will sail a more direct route to the weather mark.

Remember to have a long and a short perspective view of the wind conditions.
Stay focused on sailing well in the wind you have (immediate effects) and to manage it at your best - i.e. when your boat encounters a gust - but try to anticipate the wind changes (short terms effects) - like puff or lull - and be prepared to react to them, by proper steering and trimming the sails.

Always consider how is better to position your boat: due to the direction of the wind or its changes or for a better wind pressure in relation of the opponent boats and the next mark.

Fast sailing is a matter of more wind

[RADIO SAILING BASICS]

A key to sailing is to understand what the wind is doing: it's mandatory to **know the direction** of the wind but it's important to **focus on the wind's changes**, too.

The wind is rarely perfectly steady, it is always changing, at least a little bit and often you can use this to your advantage. How you do it?

You must stay focused on its changes of direction and speed. And act.

To keep your boat moving fast, trim and adjust sails continuously for maximum efficiency in relation to the wind direction.

To make your boat sailing faster, catch the opportunities looking for more wind strength.

How best to detect the differences in wind speed to gain on other boats

Is it possible that the wind can vary considerably over an area even relatively small of water.

For example, one side of the race course may be reached by the wind gusts first.

Both before and during the race, pay attention to **estimate the overall wind flow tendency and wind speed** fairly accurately. Look at surrounding flags or look for wind signs on the water to check what direction is the wind coming from and how fast is it blowing.

Search for the best wind to determine the favored side of the racing course.
When radio sailing, you control your sailboat at a distance: **you can stand from your point of view on the pier** and easily scan the race course.
With experience, it will be easy to "read" the wind by its effect on the water around your boat and look for the most windy side.

Where do you see spots of wind?
Wind blowing with increasing strength causes ripples that often can be seen coming on the water surface: they make the water look darker, a good indicator of wind speed. **Remember**: dark patches on the water represent more wind.

Reading at a distance the wind by its effect on the water can really help you see the distinction between puffs and lulls on the water (puffs are an increase - big or small, in the prevalent breeze). Simply seeing a wind increase coming helps you prepare for steering your boat and trimming the sails properly. Sometimes, it is difficult to keep your boat sailing in a puff for very long: anyway try! because you will sail a faster route, particularly downwind.

Is your boat sailing in the most wind available? If not, make a change and **go where it is stronger**: sail in more wind to gain more speed on the other boats.

Watch other sailboats to see how they heel when on the wind, particularly if they are sailing in a different area of the course.
Are they faster? Are they encountering more wind? Are their hulls bows pointing the direction to the mark higher or lower?
Pay always attention if a part of a race course may have more wind than another to determine, for example, which tack is better on a windward leg or how to position your boat compared to your opponents.

If your boat is sailing close behind an other boat that is close to windward or immediately to leeward, their sails will interfere with your wind and this will compromise your boat speed.

Search for clean wind and, if possible, keep your boat sailing an open lane (with no other boats disturbing the wind in which you're sailing) and you'll have more wind.

Play2Sail Radio Sailing Academy

HELMSMAN: _____

BOAT NAME: _____

SAIL NUMBER: _____

☐ ☐ ☐ ☐ **RANK**

HELMSMAN / BOAT	RACE1	RACE2	RACE3	RACE4	RACE5	TOT.	FINAL RESULT

SCORING: 1# = 1 point, 2# = 2 point, 3# = 3 point, 4# = 4 point, 5# (...)

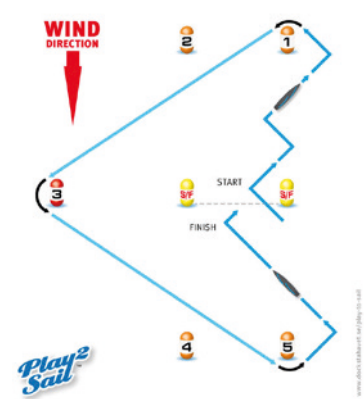
NOTE: _____

_____

_____

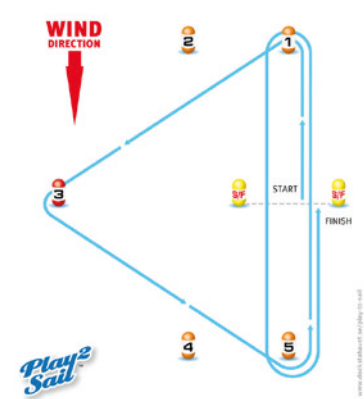
ARENA START - WINDWARD GATE - LEEWARD GATE - FINISH

TRIANGLE START - 1 - 3 - 5 - FINISH



WINDWARD/LEEWARD START - 1 - 2 - 4/5 - FINISH

OLYMPIC START - 1 - 3 - 5 - 1 - 5 - FINISH



10 basic rules of sailing racing your radio yacht

There are some essential rules on which a regatta of sailboats is based.
These following rules aim to set the rights of way between sailboats when racing.
Best way to master these rules is to practice while sailing.

Sailboat racing - radio yachting particularly - is a self-regulated sport. A fundamental principle of sportsmanship is that **when a competitor breaks a rule he will promptly take a penalty**, which may be, depending on the nature of the infraction, either performing one or two turns.

The rules, applied during a regatta of radio models, are identical to those adopted for traditional sailboats. The Racing Rules of Sailing refers to the international regulation updated - by the International Yacht Racing Union (IYRU) - concurrently with the end of the four-year Olympic period.

It is not necessary to know all of the rules (In total there are 91 rules but only 15 rules govern what boats do when they meet on the water) to successfully compete in a radio models race, but a knowledge of the basics is recommended and helpful to properly adopt the tactics to enjoy racing against your opponents.

The most important behaviors to adopt when sail racing are: 1) to carefully watch out for other boats;2) don't push the rules too hard; 3) give way if another sailboat has the right of way. It's simple. Isn't it? :)

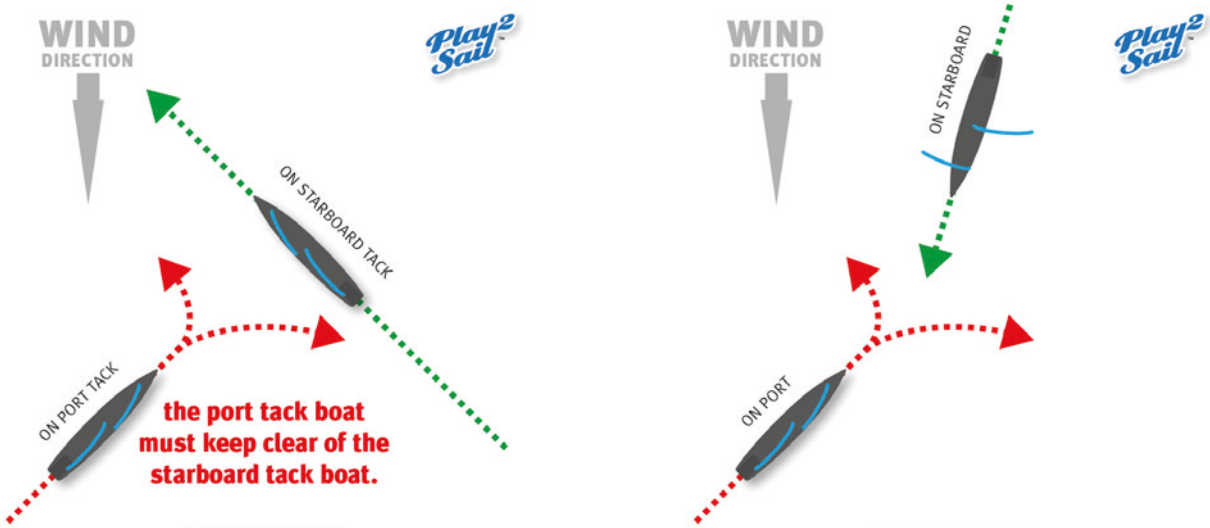
A basic principle for which the rules of sailing are applied is to avoid collisions. They can also be seen as a fundamental tool **to guarantee everyone entertainment** as part of a sailing race, which includes a departure, a performance and an arrival.

There are general rules that every sailor should keep in mind:

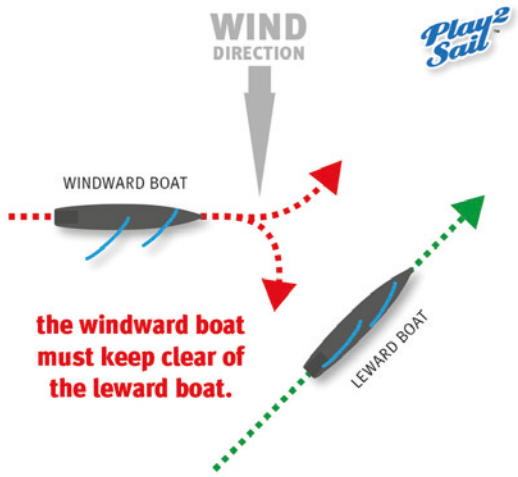
- Always sail with common sense, safety, and good sportsmanship.
- **Right-of-way is not excuse to cause a collision.** All boats (sailors) are required by rule to avoid a collision if possible.
- A sailboat in motion shall keep clear of a stopped yacht.
- After finishing your race, keep clear of the course and of other boats still racing.

Basic Rules of Sailing Racing to be aware

Especially when sailboats meet along the course and during the turning points around the floating marks.

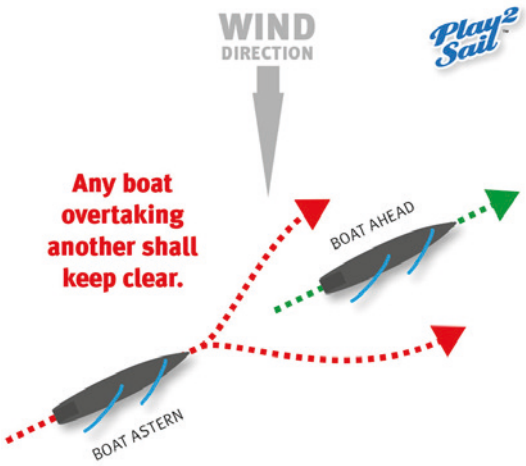


1. WHEN SAILBOATS ARE ON OPPOSITE TACKS, **THE PORT TACK BOAT MUST KEEP CLEAR** OF THE STARBOARD TACK BOAT.



2.

ON THE SAME TACK AND OVERLAPPED, **THE WINDWARD BOAT MUST KEEP CLEAR** OF THE LEEWARD BOAT.



3.

ON THE SAME TACK AND NOT OVERLAPPED, **THE BOAT CLEAR ASTERN MUST KEEP CLEAR OF THE BOAT CLEAR AHEAD.** ANY VESSEL OVERTAKING ANOTHER SHALL KEEP CLEAR.

4.

A boat that begins the process of tacking or gybing must keep clear of boats that are on a tack, not tacking or gybing. If you are tacking you lose your rights until you are settled on a close-hauled course.

5.

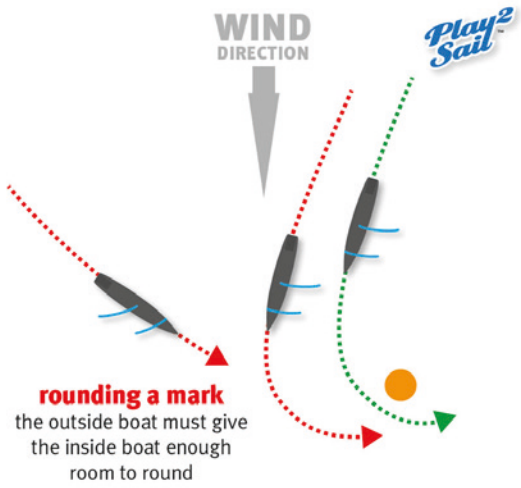
When a boat acquires the right-of-way (such as gybing her boom to a starboard tack), this boat must initially give the other boats room to keep clear. After a brief period of time, the boat can exercise her newly acquired rights.

6.

When a right-of-way boat changes course (even a little bit), this boat must initially give the other boat room to keep clear. You cannot quickly change your course to force another boat into a foul.

7.

If a boat comes from behind you and begins to overtake your boat from the leeward side, and if that boat is within 2 boat lengths off your leeward side as it begins to overlap you, that boat is not allowed to sail above its proper course. In other words, it is not allowed to push you up into the no-go zone.



8.

WHEN BOATS ARE OVERLAPPED APPROACHING A TURNING MARK, THE OUTSIDE BOAT MUST GIVE THE INSIDE BOAT ENOUGH ROOM TO ROUND, PROVIDED THAT THE OVERLAP WAS ESTABLISHED BEFORE THE LEAD BOAT ENTERED THE 4 BOAT-LENGTH ZONE.

This rule does not apply at a starting mark as boats are approaching the start. The inside overlap boat does not have rights to room at the starting mark.

This rule does apply at the finishing mark. A boat that has established inside overlap prior to the 4-boat-length zone must be given room to finish.

9.

You must round all marks in the direction specified (by race committee), and you must not touch a mark.

THE PENALTY FOR TOUCHING A MARK IS ONE FULL PENALTY TURN (360 DEGREES).

10.

A boat may take a two-turns penalty (720 degrees) when she may have broken one or more rules, (except #9 above which is one full penalty turn).

How a boat must conduct her penalty?

After getting well clear to avoid impeding other boats, making the required number of turns in the same direction, each turn including one tack and one gybe.

When?

As soon after the incident as possible.

When a boat takes the penalty at or near the finishing line, she shall sail completely to the course side of the line before finishing.

Radio Sailing **Academy**

Play2 Sail™

PLAYTOSAIL.COM

TO HAVE **FUN**, TO **LEARN** AND TO **RACE**

Play2Sail is smart: the fun of a regatta between big boats, on a smaller scale

Radio sailing follows the same racing rules as full size yachts, involving similar skills in race management and strategies, boat positioning, tactics.

MOVE UP TO RACE!