



Leeward Mark Rounding

Mark roundings are a critical part of any race because they provide opportunities to improve (or worsen) your position. This is particularly true for the approach, rounding and exit at the leeward mark.

A good rounding of the leeward mark starts at the windward mark. To arrive at the leeward mark in the best shape possible, you should:

- If sailing to a single leeward mark with a port hand rounding, position the boat to the left of the fleet down the run so that you have an inside position for the rounding. If sailing to a leeward gate, the same applies until it becomes clear the right side of the gate is favoured, at which point you may opt to sail for the right hand side.
- Sail fast on the downwind leg so that you don't lose position to other boats.
- Know what the wind is doing as you approach the leeward mark.
- Execute a competent rounding of the leeward mark – either a tactical or apex turn, depending on the circumstances.
- Be aware of the rules downwind and at the mark.

Mostly, you'll be pretty happy if you pull off a couple of these in the same rounding.

Left of the Fleet

There is an advantage in acquiring an early position to the left of close competitors and holding it all the way to the leeward mark. This gives a good chance to gain an inside spot for the leeward mark rounding. However, it's not the only way to sail the downwind leg and if more pressure is to be found out to the right, consider going for that.

Setup for Good Downwind Performance

Two aspects of DF boat setup influence how quick the boat will sail downwind:

- First is the angle of the booms when sheeted right out. You will want your booms to swing out to the angles recommended in the assembly instructions so that when running square, the maximum sail area possible is presented to the wind. When setting up your boat, the range of winch line travel and the position of the sheet guide eyes along the boom are what you need to adjust.
- Second is the amount of draft along the foot of each sail. Draft is controlled by the silicone rings which set the position of the clew hook along the boom. Move the hook inboard for more draft; out

towards the end of the boom for less draft (flatter sail).

To refresh your memory on both these settings, check back to “Baseline Settings” under Tuning.

Sail Faster Downwind

There are a few sailing techniques that will improve downwind performance.

- **Avoid Wind Shadows** – Stay out of the wind shadow of boats behind you. Even the small DF65 sail plan will cast a sufficient wind shadow to effect other boats. Surprisingly, longer wind shadows are cast as conditions get lighter. If you must pass through another boat's shadow, do it promptly with enough weight on to ensure you will get through. If a boat's shadow is affecting you, alter course a little to stay clear.
- **Sail the Angles** – The boat is a little faster on a reach than running square. Even small angles away from square running might give you a little more speed and “hotting up” the angle a little can improve your VMG to the leeward mark. We're only talking a few degrees of angle here, so don't sail out to the sides of the course and expect to come back in front of the fleet.
- **Up in the Gusts/Down in the Lulls** – On gusty days you can hot up the angle in the gusts, then use some of the gain to soak down in the lulls. The combination allows you to sail faster than competitors while the gusts last, then come back down to your original track in the lulls. You gain a little on the competition each time – pulling ahead without having to sail too far left or right of a course to the leeward mark.
- **Gull Wing** – when sailing square to the wind, fly the jib out the opposite side to the main to present the maximum sail area possible. If it's difficult to promote a gull-wing, it's probably because you are not truly square. Sometimes sheeting in a little can channel air around the front of the mast to flick the jib over. Once you have a gull-wing, you can then hot up the angle a little to further improve speed.
- **Be on the Right Gybe** – The boat will sail faster on the right gybe for the apparent wind direction. If the jib is flapping around and not doing much work, it might be trying to tell you that it's blanketed behind the main. A gybe could be the answer.

If all the above makes the downwind leg sound busy, it can be. However, you should avoid over-sailing the boat downwind and be delicate on the rudder. Increased drag from big rudder movements will slow you down big time.

Rounding the Leeward Mark

The objective in rounding the leeward mark is the same as for the windward; come out of the manoeuvre sailing at maximum speed. We achieve this by using as little

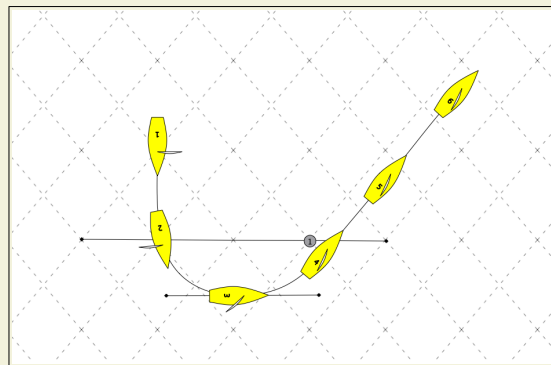
rudder as possible, and letting the process of sheeting in promote the turn. As the sails come in, the boat will want to head up towards a close-hauled angle to the wind. Check out the discussion on “Rounding Up” under Boat Handling.

The leeward mark rounding should be smooth with no sign of sails luffing. As the sails come in the boat will begin to heel, and the curved, underwater sections of the hull will help to increase the rate of turn.

Let's first assume you are rounding the leeward mark in the absence of any other boats affecting the course you might steer. There are two types of roundings to choose from – the so called *Tactical Rounding*, or the *Apex Turn*.

Tactical Rounding

The tactical rounding is characterised by the phrase “approach wide, leave narrow”. This is the rounding technique that most dinghy and big boat sailors are taught early in their sailing careers. The idea is that you execute a wide turn that keeps the boat at maximum speed and scape past the mark close enough to prevent any other boat being able to get their nose into the gap. By the time you pass the mark, you are already close-hauled. Following boats have been unable to get up on your hip and prevent you from tacking and their only options are to follow in your dirty air or tack away.



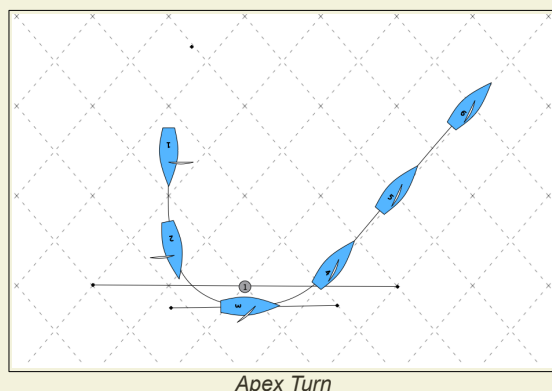
Tactical Rounding

Yellow follows the tactical rounding path that many sailors are taught: start wide and exit tight to the mark. To execute the turn, the skipper must approach wide and commence the turning manoeuvre just before the boat is beam on to the mark.

Note the distance below the mark the boat has sailed.

Apex Turn

For an apex turn, sail a track closer to the mark and begin the turn before the boat is abeam the mark. Aim to pass the mark with the boat square to the wind and complete the turn to come up to close-hauled.



Note the distance below the mark the boat has sailed – less than for a tactical turn.

You will sometime see the term Strategic Turn used to describe this manoeuvre.

Tactical vs Apex Turn

In the two scenarios above, there are two things to note:

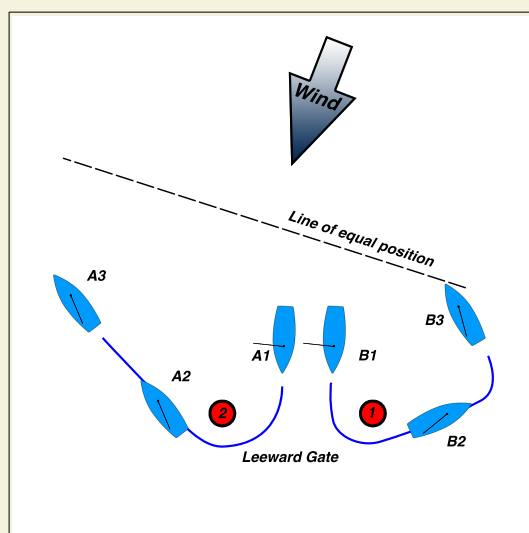
- The distance travelled to complete each turn.
- The track of each boat as it heads close-hauled upwind.

Use a tactical rounding when you need to prevent a closely following boat getting to windward of your line as you beat away from the mark. If that boat can get close enough to you and safely to windward, you will be unable to tack and they will effectively control you, even though you were ahead at the mark rounding.

Use the apex turn when you are clear of other boats and you want to make the mark rounding in the most efficient manner possible. Your track will be a little lower out of the mark, but you will have travelled about a boat length less than your competitor who opted for the tactical turn. Even though you will be sailing a lower course, you've gained a boat length on them.

Tactics at a Leeward Gate

A leeward gate offers tactical options not available with a single leeward mark. If the wind is shifted at the gate, rounding the more upwind of the gate marks puts you in a better position than rounding the more downwind mark.



Leeward Gate

In the diagram, A and B enter the gate together. B rounds mark 1 which is upwind of mark 2 due to the shifted wind direction. B sails a short distance on the headed port tack and then tacks onto starboard. The line of equal position shows B to be ahead of A.

In the above scenario, B, on starboard, also has right of way over all boats still running down to the gate. This places B in a much stronger tactical position than A who cannot tack until certain he will not infringe any running boats on starboard gybe. This tactical advantage would exist for boats rounding mark 1 even if the wind shift hadn't occurred.

Tactical options at the leeward gate are:

- If neither side is favoured, choose the side of the gate that matches your race strategy.
- If your race strategy is to sail the middle, mark 1 (see diagram) will give you slightly better tactical options if you need to sail back through any boats still running down to the gate.
- If the wind is shifted at the gate, round the upwind side of the gate and tack onto the lift as soon as you are able. If rounding with boats close behind, execute a tactical rounding to protect your ability to tack at will.

Spotting Shifts at the Leeward Mark

It is often difficult to pick shifts at the leeward mark, or gate particularly if it is at some distance from the race control area. Some things to observe are:

- Flags on the top of marks give the best indication of wind direction at the bottom of the course.
- If you are able to gull-wing with the sheets right out and the jib drawing, the wind is pretty much directly astern.
- If one gybe is favoured, that indicates a shift to that side.