

10

CHAPTER

Sailing Downwind

KEY CONCEPTS

- Sailing downwind
- Sailing by the lee
- Gybing
- Types of gybes

Sailing downwind, or *running* with the wind coming over the stern, is often the sailor's favourite sailing direction because it's so easy.

When sailing on a run, the boat is in the *push* mode and the sails are eased out all-the-way to expose as much sail area as possible to the wind's pushing force. Because the wind is pushing on only one side of the sail, the sail telltales do not work in their normal way. Since you are travelling at nearly the same speed as the wind, the feel of the wind on your face and body will be greatly reduced.

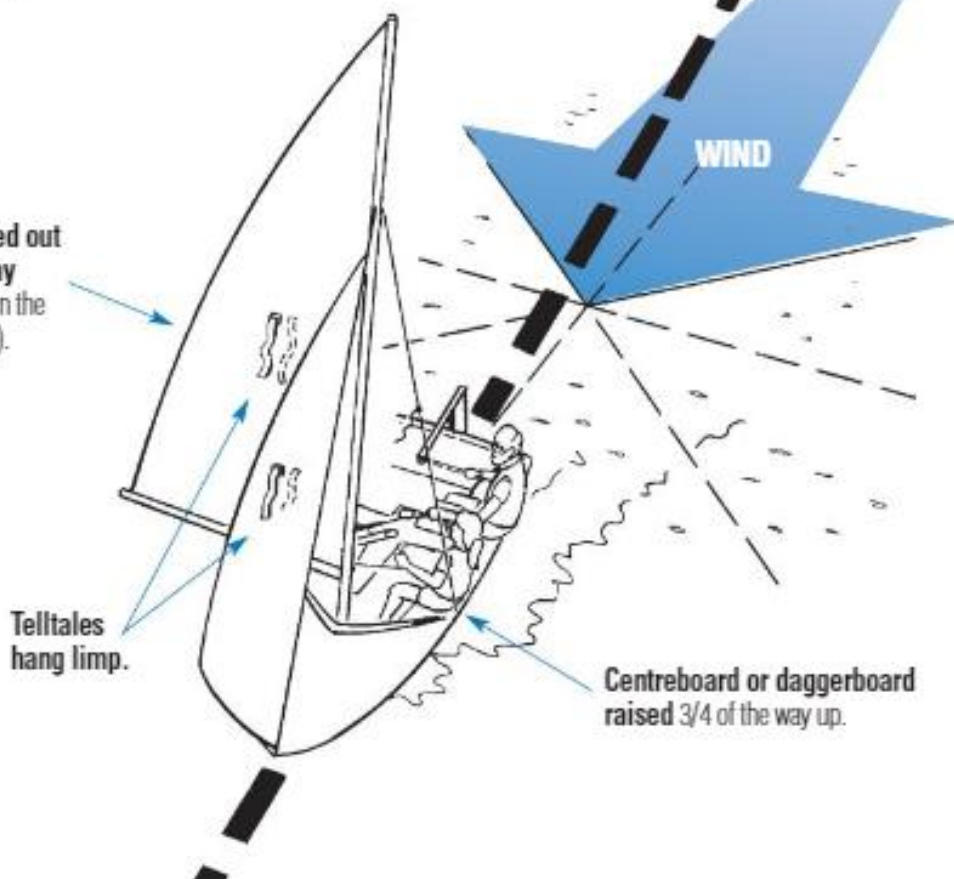
Downwind Manoeuvres

When sailing upwind (toward the wind), steering to change the wind orientation from one side of the boat to the other is called a *tack*. When sailing downwind (away from the wind), steering to change the wind orientation from one side to another is called a *gybe*. During a tack, you push the tiller *toward* the sails to turn the boat *toward* the wind and the bow (front) of the boat crosses the wind. In a gybe, the tiller is

Sails eased out all-the-way (operating in the push mode).

Telltails hang limp.

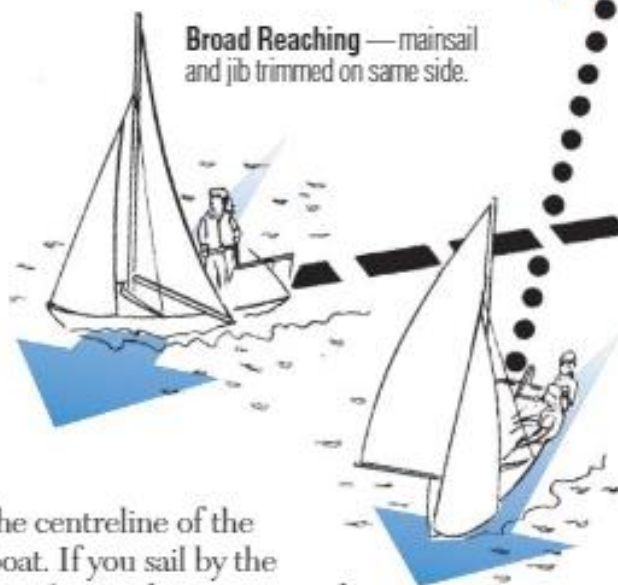
Centreboard or daggerboard raised 3/4 of the way up.



pulled *away* from the sails to turn the boat *away* from the wind, and the wind swings across the stern (back) of the boat. Both tacking and gybing require moving the sails across the boat from one side to the other.

A gybe requires a clear sense of the wind direction. By knowing the wind's direction, you can time your gybe just right, smoothly swinging the sails from one side of the boat to the other. If your timing is off, the sails and the boom can snap across the boat unexpectedly. This is called an *accidental gybe*.

One of the most common causes of accidental gybes is *sailing by the lee*. When you sail dead downwind, the wind is coming directly over the stern — down



the centreline of the boat. If you sail by the lee, the wind moves toward the side of the boat that the sails are on. When this happens, the wind can push on the wrong side of the sail and snap the mainsail across the boat. One of the signs that you are by the lee is that the jib will hang limp and start to cross the boat. You can also watch the wind indicator at the top of the mast, the telltales on the windward shroud, and the ripples on the water as indicators of the wind direction.



Tips for Easier Gybing

1. Practise the land drills first until you perfect the hand and tiller exchanges.
2. Before the gybe, try to locate the wind direction by wind sensing or looking at the masthead wind indicator or the telltale on the windward shroud.
3. Lower the centreboard halfway.
4. Make sure all the sheets are free and clear of any entanglements.
5. Turn the boat very slowly while gybing.
6. Keep an eye on the new course sailed.
7. Make sure the crew and helmsman talk through the manoeuvre.
8. Practise at first in smooth seas and light winds.

Gybing Smoothly

When gybing, the mainsail will want to snap across the back of the boat and then suddenly fill with wind when it reaches the other side. In stronger winds, this sudden force can cause the boat to heel and spin, or even capsize. The best way to counteract this — and make your gybe smooth and safe — is with a *controlled gybe*. The key to a controlled gybe is how you handle the mainsail during the gybe. It should be slowly sheeted in as you start the gybe, then centred as the stern crosses the wind. Finally it is eased out “under control”.

If you steer straight through the gybe without controlling the mainsail, it will suddenly swing across uncontrolled. This is called an *accidental gybe*. These gybes are no problem in lighter winds, but in stronger winds they can cause loss of control and strain rigging and gear.

Remember, if the wind is too strong for a safe gybe, you can steer around into the wind and tack the boat instead.

Crew and Helmsman Responsibilities

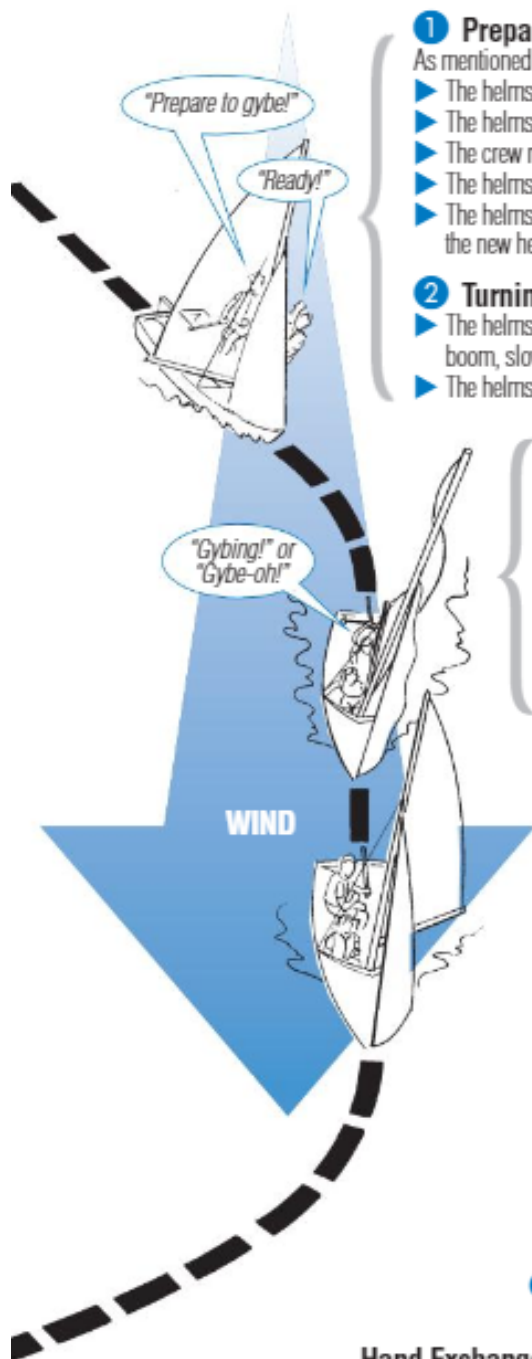
In addition to handling the jib, the crew helps balance the boat and serves as lookout for the helmsman. The crew may also have to help the helmsman gybe the boom. The helmsman should always call out “*prepare to gybe!*” and “*gybe-oh!*” at the proper times.

Of all the sailing manoeuvres, the gybe has the greatest potential for error. But if you combine wind awareness, smooth steering and a little practice, your gybes will soon be safe and confident.

5 Completing the Gybe

- ▶ The helmsman adjusts the boom to the new heading.
- ▶ The crew trims the jib sheet.
- ▶ The helmsman and crew check to see that the new heading is correct and reorient themselves to the new wind direction.





1 Preparing for a Controlled Gybe

As mentioned earlier, timing is key to a smooth gybe.

- ▶ The helmsman and crew check to see that it is safe to gybe.
- ▶ The helmsman announces, "prepare to gybe!"
- ▶ The crew responds, "ready to gybe!" if all is ready.
- ▶ The helmsman determines the exact location of the wind.
- ▶ The helmsman picks a land reference to steer toward on the new heading.

2 Turning Away From the Wind

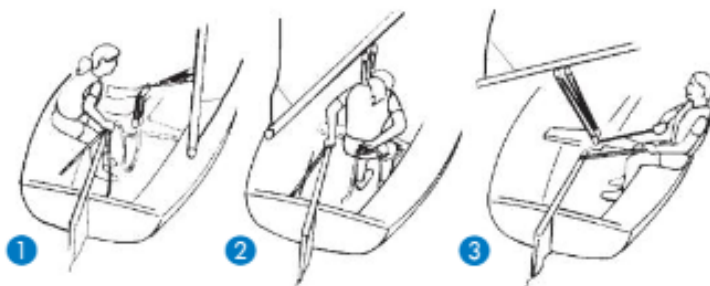
- ▶ The helmsman moves the tiller gradually away from the boom, slowly turning the boat. The crew lets the jib luff.
- ▶ The helmsman slowly starts to pull in the main sheet.

3 Stern Crosses Through Wind

- ▶ Grabbing all the main sheet, the helmsman brings the boom to the centreline and says, "gybing"
- ▶ The helmsman lets the boom cross the centreline and eases out the main sheet. As the boom crosses the centreline, the helmsman briefly centres the tiller.

4 Turning Toward Wind

- ▶ The helmsman switches the main sheet and the tiller to opposite hands and then resumes steering gradually through the gybe. Helmsman and crew reposition themselves on the new windward side opposite the boom.



Hand Exchange While Gybing

- 1 Just before you grab the main sheet to throw the boom across the boat, transfer the sheet from your sheet hand to your tiller hand. Grab the main sheet between the boom and the cockpit with your sheet hand, and pull the boom across the boat.
- 2 As the boom crosses the boat, step across the boat facing forward, pass your old sheet hand behind your back and grab the tiller extension or tiller. Release the tiller from your other hand.
- 3 Adjust the main sheet to the new heading.

Quick Review

- ▶ Define a gybe. (answer on p.54-55)
- ▶ What direction do you push or pull the tiller to begin a gybe? (answer on p.55 & 57)
- ▶ Define an accidental gybe and two signals that it is about to happen. (answer on p.55)
- ▶ What part of the rig should you be particularly aware of during a gybe? (answer on p.56)
- ▶ Describe the essential communication between helmsman and crew during a gybe. (answer on p.57)

Think about It...

- ▶ Why does the wind seem to have less velocity when you are sailing downwind?
- ▶ What are three ways of preventing an accidental gybe.
- ▶ If you are unsure or nervous about gybing, what are your options?