

# How to Tack and Gybe

## Different to a Monohull

Multihulls are difficult to tack because of the high turning resistance of the long narrow hulls. The rudder stalls easily causing a braking effect if the tiller movement is too sudden and it is most important to have enough speed going into the tack for the boat to carry its way through the wind until the sail fills on the new tack.

The rudder will also stall when sailing off-wind if the bow submerges and lifts the stern out of the water during a gust or a gybe.

In all weathers tacks should be smooth but firm, with particular care taken to maintain speed in the second half of the tack.

Gybes should be co-ordinated so that, when the sail crosses to the new side, the power comes on as smoothly as possible, to prevent the stern lifting, stalling the rudder and reducing control.

**Technique Light Winds [0-3 knots / force 1] TACK** - Push the tiller gently to no more than 45 degrees to turn into the tack.

As you go into the tack, pull the sail in a little then, as the battens pop over, ease the boom out 2-3 feet and centralise the tiller. Wait for the boat to pick up speed, which usually takes 5-10 seconds, and gently sheet in as full speed is reached. Don't be tempted to try pointing up towards the wind again too soon, as the boat is initially sliding sideways and this will only be exaggerated if you steer to turn back up into the wind. With the tiller central, the boat will bear away and pick up speed - listen for the wake - and it can then be brought back on course.

If the battens won't pop across reach behind and give the two falls of the mainsheet a sharp jerk.

**Technique Light Winds [0-3 knots / force 1] GYBE** - If you are on a reach, the turn should be smooth, not sharp. If you are sailing dead downwind the boom can be pulled across with the two falls of mainsheet behind the sailor or with special gybing lines attached to the kicker boom in front of the mast. Make sure the mainsheet does not droop and catch in the rudder T-bar and, after tacking or gybing, make sure the sail is set properly by trimming and adjusting until all the tell-tales are flying across the sail horizontally.

**Technique Medium Winds [4-10 knots / force 2/3] TACK** - To turn into the tack, push the tiller smoothly but firmly to 45 degrees and pull the sail in. As the battens pop across, ease the sail slightly, so that the boom end is over the corner of the transom. Straighten the tiller and wait for the boat to pick up speed then concentrate on pointing the boat as close to the wind as possible whilst making the tell-tales on the sail fly horizontally.

**Technique Medium Winds [4-10 knots / force 2/3] GYBE** - If you are sailing a reach, the turn can be sharper. If you are sailing a run, the sail can be pulled or left to blow across but make sure the mainsheet is not slack as it will catch.

**Technique Stronger Winds [11-33 knots / force 4/7] TACK** - To turn into the tack, push the tiller smoothly but firmly to 45 degrees and pull the sail in. As the boat goes beyond head-to-wind, ease the boom out 3-4 feet, or even more in strong winds. Straighten the tiller as the sail fills but, if the boat does not accelerate, ease the sail out and bear away a little more, otherwise you will go head-to-wind and stop. As the boat accelerates, gradually sheet in but do not pull the boom closer than about an arm's length from the cockpit. Be very careful not to point too high and stall. Speed is more important than sailing close to the wind.

**Technique Stronger Winds [11-33 knots / force 4/7] GYBE** - Reaching: Ease the sail and bear away to a run then sheet the sail almost right in, turn a little more and, as the sail blows across, let the boom run out to 90 degrees or until the tell-tales are all flying horizontally.

**Running:** Pull the sail in as far as possible and turn. As the boom blows across, steer an S-shaped course to counteract the force of the gybe. Let the boom run out to 90 degrees being careful not to let the sail fill early, as the force will lever the stern out of the water, reducing steering control and slowing the boat.

### **Trim, Balance and Course Made Good**

On a beat, it can pay to lean over the leeward side in light weather, to lift the windward sponson out of the water and reduce drag.

Downwind you should lean out over the windward side, so that the leeward sponson is lifted and the sail is heeled to windward, which both cuts down drag and moves the sail's centre of effort over the boat's centre line. If the power generated by the sail is all on one side of the boat's centreline, it will try to push the boat around in a circle. When it is over the boat's centre, the boat will track straight with no correction needed by the rudder.

Otherwise the boat should always be trimmed level to make the longest waterline, which gives maximum speed (Formula: Speed = 1.45 x square root of waterline length).

On a beat in stronger wind, continuous spray coming off the outer end of the front crossbeam shows that full speed has been reached. Keep tacks to a minimum, as they take a long time and you may lose ground to boats that tack less often than you.