



Ultimate 20 Sailing Guide

Once your boat is setup, there are three sail adjustments that will affect your boat speed more than any other while sailing to weather. These are mainsheet tension, jib sheet tension and vang tension. If you feel that you lack speed, there is a 90% chance one of these adjustments is incorrect. By following this trim guide you can spend more time concentrating on tactics while still going fast.

Mainsail Trim

The mainsail on the Ultimate 20 is quite large and requires constant attention. Experiment with the different controls to learn how they affect mainsail shape and how they interact with each other.

Top Battens

Tension the top two battens very tight for light to medium conditions to power up the top of the sail. Use medium tension in heavy air to flatten the main. In over 16 knots, a stiffer top batten will be faster.

Mainsheet

The throttle of the boat! In light air, trim the main so the aft 2' of the top batten is parallel to the boom or twisted open 5 to 10 degrees in light air and chop. In medium air, sheet the mainsheet really hard to flatten the main and tighten the headstay to improve pointing. The aft 2' of the top batten should be parallel to the boom or hooked to windward 5 degrees until the boat begins to become overpowered. Once the boat begins to become overpowered, use the mainsheet to control twist and adjust continuously for speed and stability.

Traveler

The traveler controls the angle of attack for the mainsail. The Ultimate 20 likes to be sailed as flat as possible. Adjusting the traveler is quicker than adjusting the mainsheet in puffy conditions, and it allows for a constant headstay tension (as opposed to using the mainsheet which changes the headstay tension every time it is adjusted). The goal is to keep the boom on centerline until the boat becomes overpowered. As the breeze increases, gradually drop the traveler 2" at a time. In heavy wind and wave conditions, center the traveler car, pull on maximum boom vang and play the mainsheet to get over waves and through the puffs. In extreme conditions, when the main is flogging, ease the vang slightly and use the mainsheet. This will twist open the top and allow the bottom of the main to still work.

Boom Vang

The vang controls the vertical travel of the boom and induces lower mast bend. In light air, the vang should be completely loose. As the breeze increases and you sheet the main harder, take the slack out of the vang line to keep leech tension when you have to ease the mainsheet in a puff. When it is windy enough to switch to vang sheeting, pull the vang on really hard to flatten the bottom of the main. Downwind in all wind conditions, set the vang tension to keep the top batten parallel to the boom. The vang is an important control downwind so it should always be held in the crew's hand.

Outhaul

The outhaul controls the depth in the lower third of the mainsail. In light air and chop, the outhaul should be eased 2" from maximum tension. In every other upwind condition, the outhaul should be tight. In heavy air, tension the outhaul as tight as possible. Ease the outhaul downwind so the center of the foot is 5" from the boom.

Cunningham

The cunningham controls the fore and aft position of the mainsail draft. In light air, the cunningham is totally eased so there are horizontal luff wrinkles in the sail. In medium wind, tighten the cunningham so the wrinkles are just removed. In heavy air, pull the cunningham on very firm to pull the draft forward. Downwind, ease the cunningham totally off.

Jib Trim

Jib Sheet

The jib sheet requires constant adjustment to keep the boat up to speed. When trying to accelerate after a maneuver, after hitting some waves, at the start or whenever the boat feels slow, ease the jib sheet to open the top leech and allow the jib to "breathe". Trim the sheet in tight when the boat is up to top speed to maximize pointing. In heavy air, ease the jib sheet in the large puffs to keep the boat flat when easing the mainsail is not enough.

Jib Leads

Try to set the leads so the luff telltales break evenly or the top telltales are breaking slightly ahead of the bottom two sets. In light air, move the leads forward and ease the sheet to provide power and twist for acceleration. In medium air, set the jib so the leech is even from top to bottom and the jib is sheeted tight for maximum pointing. In heavy air, move the leads aft and sheet hard to flatten the foot and twist the leech to depower the boat. Put marks on the deck so you can duplicate your jib lead settings.

Jib Luff Tension

Jib luff tension works like the cunningham on a mainsail; it controls the fore and aft position of the draft. Be careful not to over-tighten the jib luff because the Ultimate 20 has a headstay that sags a lot. This coupled with a tight jib luff will pull the draft too far forward, making it hard to point.

Light air:	Slight wrinkles.
Medium air:	Slight wrinkles to no wrinkles.
Heavy air:	No wrinkles to very tight.

Leech Line

Since there are no battens on the leech of the jib, the leech line becomes important. Always make sure it is as loose as possible without the leech fluttering. Try to avoid hooking the leech to windward, especially in light air. Always release the leech line after sailing each day!

Spinnaker Trim

Tack Line

Mark the tack line so the crew can duplicate settings.

- Light air:** Tack to the pole.
- Medium air:** Eased 2' to 3' to help rotate the spinnaker to windward allowing you to sail lower angles. In extreme choppy conditions, pull the tack to the pole to stabilize the spinnaker luff.
- Heavy air:** Tack to the pole.
- Reaching:** Tack to the pole.

Spinnaker Sheet

In all conditions, play the sheet constantly. Keep about a 6" curl in the luff of the spinnaker. Be extra careful not to overtrim the spinnaker as this is very slow!

Crew Organization

It is important to practice and keep the same core crew on an Ultimate 20. The boat rewards smooth and organized teamwork. The goals are for each member to have assigned jobs and stick to them, have everyone involved, and to keep maximum weight on the rail as long as possible. Moving from the back of the boat forward, we label each position as:

1. Helmsperson
2. Trimmer
3. Bow

Helmsperson

- Upwind:** Steer. Mainsheet and traveler adjustment. Dictate cunningham, vang, outhaul, jib sheet, and crew weight adjustments.
- Tacking:** Steer and tack traveler. Ease mainsheet in light and heavy air. Help roll the boat.
- Weather Mark:** Call for normal or late hoist, ease mainsheet and call vang trim.
- Jibe:** Steer, throw mainsheet and help roll.
- Leeward Mark:** Preset traveler. Call to unfurl jib and spinnaker douse. Trim main.

Trimmer

- Upwind:** Trim jib sheet. Check sail trim and monitor speed and pointing compared to other boats. Help with tactics.
- Tacking:** Release old jib sheet, help roll, tack jib and fine tune the jib sheet from the weather rail.
- Weather Mark:** Ease jib 3' and cleat it. Pull out tack line and pole while the bow person is hoisting the spinnaker. Grab spinnaker sheet during hoist and begin to trim the sheet once the spinnaker is fully hoisted.
- Jibe:** Ease spinnaker sheet and rapidly trim lazy/new sheet as boat jibes. Help roll boat and rapidly ease new sheet when spinnaker fills on new jibe.

Leeward Mark: Trim jib sheet to unfurl jib. Ease spinnaker sheet during douse. Release tack line and retract the spinnaker pole. Trim jib sheet around mark from weather rail.

Bow

Upwind: Call waves and traffic control. Adjust sail controls.

Tacking: Roll boat and overhaul old jib sheet.

Weather Mark: Feed out spinnaker from bag. Raise the halyard. Furl the jib. Adjust sail controls to downwind marks.

Jibe: Pull down and overhaul new sheet on inside jibes. Roll boat.

Leeward Mark: Adjust sail controls for upwind. Release jib furler line. Release spinnaker halyard and gather spinnaker. Finish stowing spinnaker from weather rail.

Boathandling

Upwind

The Ultimate 20 is most efficient when sailed as flat as possible. Excessive heel causes leeway, which is slow. The skipper must work the helm and the sail controls to keep the boat at a constant angle of heel while the crew hikes as hard as possible. In regards to steering, the Ultimate 20 should not be pinched unless in heavy air and/or flat water. As a rule of thumb, err on the footing side to keep the boat moving. In light air, the crew weight should be as low and close together as possible and forward near the shrouds. Promote some leeward heel in super light air. In medium air, the crew is close together, forward against the front stanchion and hiking hard. In heavy air, the crew is close together 1' to 2' aft of medium air and hiking hard. In light to medium air, the crew should roll tack hard against the lifeline as one team. This will maximize the crew weight to gain maximum roll.

Downwind

Like upwind, the Ultimate 20 should be sailed flat. The crew moves side to side to keep the boat flat. The weight should be low and forward while in displacement mode and gradually move aft as the wind increases to promote planing. In light air, sail a hot angle to keep the boat moving at all times. As the breeze increases, begin to bear off to sail the puffs as low as possible until the boat slows. Then, head up to regain speed. This should be a constant "S" course. In planing conditions, sail a hot angle again to promote planing. Once planing, bear off until the boat is about to fall off of the plane, then head up again to maintain the plane. The extra distance sailed to plane is easily compensated for by the tremendous gain in speed. In light to medium air, the crew should roll jibe just like roll tacking upwind.

Asymmetrical Spinnaker Tricks

Jibing

There are two type of jibes possible with asymmetrical spinnakers, the inside jibe and the outside jibe. The inside jibe is used in medium air and maximum roll jibe conditions, while the outside jibe is used as soon as the water begins to whitecap. The only difference in setup is:

1. The sheets need to be long enough to run around the outside of the spinnaker
2. The tack line is attached differently.

For inside jibes, run the tack line from the pole, over the lazy spinnaker sheet, to the clew of the spinnaker. For outside jibes, simply run the tack line under the lazy spinnaker sheet. After that, both jibes are the same. Ease the sheet and trim the new one as rapidly as possible.

Sets

Sets are performed aft and around the leeward shroud. Make sure the spinnaker is pre-fed and clear to be hoisted. A smooth set will provide tremendous gains in a race.

Dousing

There are three types of douses, the windward, the "Mexican" and the leeward douse.

The windward douse is used to douse the spinnaker on the port side of the boat when approaching a mark on port to be rounded on port. Well before the mark, sail straight downwind and release the sheet while pulling the weather sheet around the headstay and into the boat. Release the pole, then the halyard, then the tack line and stow the spinnaker.

The "Mexican" douse is used to douse the spinnaker on the port side when approaching a mark on starboard to be rounded on port. Understand the mark slightly, so when you are two boat lengths away you can bear off and jibe. As you are jibing the boat, trim the spinnaker in tight on the port side and do not jibe the spinnaker. As the sail backs into the rig, release the halyard and drop the sail onto the deck. Release the pole and the tack line and stow the spinnaker.

The leeward douse is used to douse the spinnaker on the port side when approaching the gate on starboard to be rounded to starboard. Bear off and overtrim the sheet and keep it in. Grab the foot and ease the halyard and gather the spinnaker behind the shrouds, then release the pole, then the tack line and stow.

Sail Care

After each use, wash the sails with fresh water and dry thoroughly. Fold the mainsail in half and roll down the leech while keeping the battens parallel. If the mainsail will not be used for a while, release the batten tension. If the boat will not be sailed for a while, remove the jib from the boat. Roll the jib from the head down and store in its tube bag. Flake the spinnaker and store in its bag.

Summary

The key to Ultimate 20 sailing is not memorizing this tuning guide, but understanding how these settings affect the boat and how it feels. The goal is to be able to identify that something is wrong and then have the ability to quickly fix the problem to keep your boat moving fast.