

DeBrief: Consider the Slot & On Moding

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Air Flow & The Slot

When we talk about the slot we are talking about the movement of air flow across the trailing edge of the jib and onto the backside of the main. While the actual air is invisible, the effects are obvious. If the slot is too closed, the boat doesn't unload. In windy conditions, the mainsail with backwind. If the slot is too open, the boat won't point upwind.

And as far as the physics are concerned, the backside of the mainsail accounts for nearly 70% of the boat's driving force. Good laminar flow (smooth movement of fluid, aka air) is directed by the jib. We can review the basics again, if the slot is too closed the air gets jammed up. If the jib is too eased, the mainsail is disrupted by turbulent air.

Picture this: Wind is made of air molecules, comprised of water vapor. Air is a fluid and water is a fluid. Think about the build up of water that is jammed in a too closed slot. Picture snow building up and you're trying to run while pushing a snowplow. The build up of snow slows you down requiring more force to maintain speed. This is what happens when your jib is trimmed too tightly.

We don't have this problem as often. More often than not, we experience the other side of improper jib trim: Too eased. This effect fails to create laminar flow across the mainsail, reducing the overall power potential of the main.

That's a lot of words to say. **If it feels low or slow, change something.** When your jib trim is off, the whole set up feels off. The bow feels heavy and sticky. The boat luffs at close hauled too easily. The process of making sure you know the right range of jib 'max ease' and 'max trim' is hard to do on your own. Having a coach sight it and relay that info back is key. As well as eyeing your markings on the jib sheet above the jib car's block.

You can problem solve the gap in the slot to find the best position with a few steps and then regular check ins. First, **put a telltale above and below the top batten of the jib's leech.** This will help you sign position of the leech and the spreader tip. Second, **mark your jib sheet** at the block, or at the jib cleat so you know your range once you find make ease and trim. Then, look at **the mainsail luff just above the lowest batten**, while sailing upwind to see what's going on with the slot.

Let's Talk About Moding

When we talk about moding, we consider seastate and wind velocity. High mode-- in lulls, or super puffs for lighter teams in flatter water or up big waves. Low mode—in puffs or grinding through steep chop.

We use moding to race around the course. With other boats we can gain lateral distance and leverage, or develop gaps in ladder rungs by changing gears between high and low.

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Here's the thing, VMG is a math problem. Which means it has a correct answer and an incorrect one. There is an optimal mode to sail, once conditions are factored in. Fuzz says, "let the boat tell you where it wants to go."

Skippers can intuit where the boat wants to track based on helm pressure. While you're finding the best VMG mode for your environment, easing or tightening your grip on the helm lets you do this.

Some skippers like to sail with a little weather helm to feel the grip of the boat. A great warm up for shifting to a more neutral helm is sailing the boat with windward heel. They give the benefit of sailing the crew lower on the wire and balances the helm pressure. Both skipper and crew become more sensitive to the boat's balanced setting.