

# OMEN

ASSEMBLY AND TUNING GUIDE

Thank you for joining Omen on our mission to design the future of performance wave foiling and supporting precision American manufacturing. The goal of the Operator series is to achieve the highest possible efficiency across the widest possible range, and ultimately, to provide you with a supernatural experience.

This guide will get your new foil tuned quickly, so you can focus on riding and crushing parking lot beers ...or changing diapers. We'll post more performance tuning content on our social channels, but feel free to get in touch directly for support or product questions.

Welcome to the new paradigm of flight performance.

Download/View Guide Online:



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## QUICK ASSEMBLY

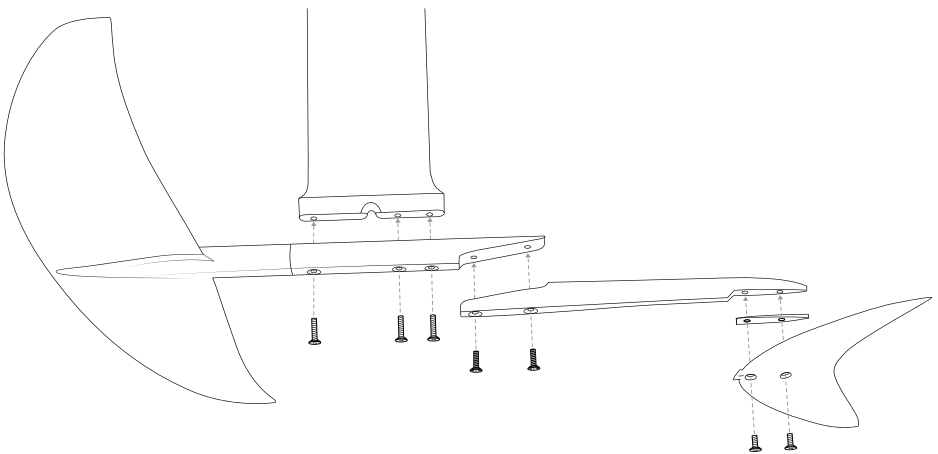
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A Torx tool and hardware is located in the mast pocket:

- 3x 22mm M6 screws for fuselage to mast connection
- 2x black 22mm M6 screws for fuselage joint
- 2x black 14mm M6 screws and shim set for tail wing
- 4x T-nuts with 25mm M6 screws... you know where to stick 'em
- Stabilizer shim set

The Omen Shim System was created to have your foil fly perfectly right out of the box. Scan the QR code on your front wing and select your mast and tail wing size to see the perfect shim. As start, use the Ahi Small on the 850 with no shim or Ahi Large on the 1050 with no shim.

When securing the mast foot, tighten the screws front to back. After tightening, snug up each of the three bolts again to ensure the taper is fully seated. This provides the most direct connection possible to your foil through a geometric lock rather than relying on hardware. Use loctite on these three bolts to ensure they do

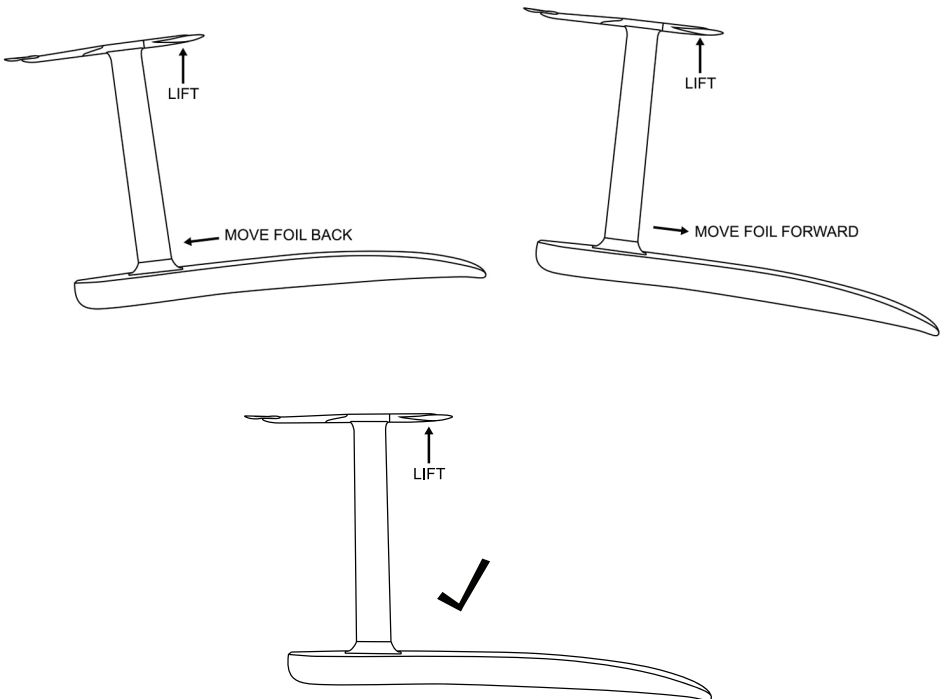


## TRACK PLACEMENT

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Track placement is undervalued and critically important to maintaining pitch control through aggressive turns. Attach the fully assembled foil to the board on level ground. Place your fingers under the center of the front wing. Lift the board and foil from this point and note the angle of the board relative to the ground.

Move the foil forward or back in the tracks until the board lifts parallel to the ground. This will align the foil's lift with the system's center of mass. Turns will feel balanced and the foil will generally perform at its best.



## FINE TUNING TRACK PLACEMENT

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If you feel the board is pitching nose down during turns - move the foil forward in 5mm increments. If the nose is lifting during turns - move the foil back in 5mm increments. These minor adjustments are the final touch and will compensate for the particular stabilizer and shim you are using.

If you ride with straps it is highly recommended to remove them while tuning the foil's position in the tracks. Once the position is dialed in and you have worked out your ideal foot position, throw those puppies back on and get crazy.

### **Other Notes on Track Placement:**

The harder you turn the more sensitive the system is to track placement. Having the foil slightly further forward of the balance point (tail heavy) will provide a bit more pump and glide at the expense of stability and turning performance.

In our opinion many foilers are running their foils too far forward in their boards. While this can allow you to use less tail shim, it decreases the pitch stability of the foil (especially at higher speeds) and makes the foil more likely to pull up and breach during aggressive turns. Although very skilled riders can accommodate for these factors, most people will ride faster and more efficiently with a well balanced setup, especially in bigger conditions.

This will mean your foil is placed relatively further back in the tracks relative to current standards and you'll get hassled at the beach by dudes sporting dad-bods. Trying your foil may shut them up though.

## ADVANCED TUNING WITH BASEPLATE SHIM

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Omen boards and foils are designed together for the best general performance in surf, wing, and downwind freeride without a baseplate shim. Most modern production boards have a similar track angle to Omen and will not require a baseplate shim for general use.

The below is a guide to subtle adjustments to get your board and foil performing optimally together or tuned to a specific application. In general, add 1 degree of “board nose up” shim for more control in bigger/faster conditions or 1 degree “board nose down” shim for more efficient take offs in small waves or light wind.

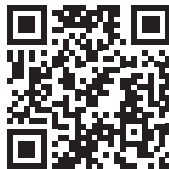
Shimming the front of the baseplate will make the board fly more “nose up”. This provides a more secure feeling at high speeds and drawn out carving turns, while making it more difficult to pump at low speeds. Try this if you are looking to optimize for high speed winging or tow foiling.

Shimming the rear of the baseplate will make the board fly more “nose down”. This will increase your ability to do pivot turns and require a more back foot oriented carve. It will make pumping using small “taps” easier but can feel twitchier at higher speeds. Try this if you are looking to optimize for lower speed applications like downwind, small wave surfing, or dock starts.

If you are stalling the foil or feeling it “drop out” during pumping, your board is likely too “nose down”. Shimming the front of the baseplate will correct this.

Check out our video on this topic at the below link or QR code:

<https://youtu.be/trpzDnNUtLQ>



## NOTES ON ADVANCED TUNING WITH TAIL SHIMS

The OSS provides a tail angle that will be optimal for most riders. Departing from the recommended shim will change the balance of front and back foot pressures at various speeds. Prior to changing the tail shim from the Omen Shim System (OSS) standard we recommend high speed stability and pumping performance be tuned using base plate shims.

If you have perfected your baseplate angle and are looking to refine the feeling of your foil to your personal preference the tail wing angle is the next game in town. If you are at this stage in your foiling journey you may scoff at tips from a pamphlet, but please humor us for one more paragraph!

The OSS is beneficial even for highly advanced riders looking for a very specific feel since it can be used as a baseline. If you have tuned an Omen front wing, mast, fuselage, and tail combination to your personal preference, say  $.5^\circ$  or  $1^\circ$  less angle than OSS, then this same  $-.5^\circ$  or  $1^\circ$  can be applied to any new combination of front wing, mast, fuselage, and tail combination for a similar result.



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