



<https://www.free-ride-addicted.fr>

## Phone holder for angle measurements

Thank you for your purchase. Collecting user feedback is in FRA's DNA. Do not hesitate to send me any ideas for improvement, defects or difficulties that you may notice.

### Interest:

Adjusting the angles of your foil correctly is not easy but essential! A brief reminder of the issues.

### The rake:

Even if rake seems to lean the foil backwards when the board is turned over on the sand, it actually adjusts the incidence of the board in the air as, once in flight, it is the foil that imposes the global balance. Increasing the rake means raising the nose of the board in flight.

This is very important for the touchdowns: the hull must remain slightly pitched up so as not to stick to the water during the touchdowns. Conversely, when the board is on the water, too much rake will angle the foil down and will require you to raise the nose more to take off, which will cause you to drag water...

The rake will be measured between the front wing and the hull. (because the wing can also have an angle on the fuselage...) An accuracy of 0.5° is sufficient.

Be careful, boxes on the boards (even of the same model) are not always placed the same. It is good to remeasure the rake if you change board.

### The longitudinal V (Pitch):

Rear foot, front foot, this translates the feeling in navigation of the adjustment of the longitudinal V of the foil. On my famously rear foot Aeromod, if I add 2°, I won't be able to hold it...

The longitudinal V is the angle between the front wing and the stab. It is measured by taking a reference between the trailing edge and the leading edge.

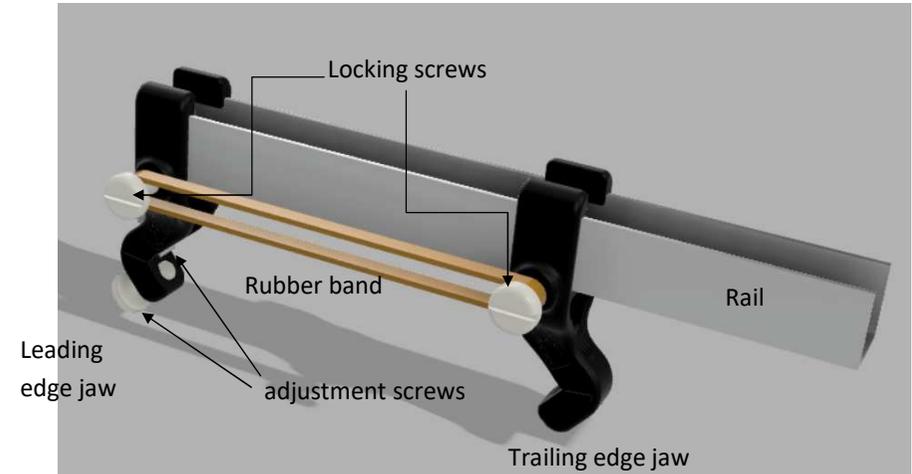
Increasing the longitudinal V will make the foil pitch up more. Decreasing it will calm it down... But as all hydrodynamic forces evolve with the square of the speed, if the nose comes-up at low speed, then at high speed it will throw you out of the water... And of course, that will also depend on what is happening in the air, power, size and height of the sail etc... Also on the size of the wings, or the pitch of the front wing...

If your stab is not adjustable with shims (if it is set by advancing it or adjusting screws) then only the measurement will allow you to precisely reproduce your setting from one session to another, or with your colleagues.

An accuracy of 0.2° is felt in navigation.

0.1° will show on the top speeds...

### Use :



As shown in the videos, this support is used with a smartphone and a bubble level application of your choice. We will ensure that the side of the phone (or the shell) is flat. Typically on my phone the shell buttons protrude slightly on the left side but not on the right side. So I have to put it in the right way.

But before putting the phone in the rail, it is necessary to position the support on the wing. The jaw on the leading edge must remain blocked at the end of the rail so as to keep good access to the adjustment screw on the intrados side. A rubber band will allow the wing to be pinched slightly between the two jaws.

If you feel that the leading edge is not aligned exactly with the bottom of the notch, 2 screws allow you to press on the extrados or intrados side if necessary. Be careful, this will compress the wing between the 2 jaws. **It is recommended that the trailing edge locking screw be released to avoid the risk of marking the sometimes very thin trailing edge while using the adjustment screws.** Finally, by tightening the locking screw on the trailing edge side, this blocks the assembly.

You can set the zero on the hull and then put the phone in the rail to read the rake or set the zero on the main wing and move the system to the stab to read the pitch.

