

Trimming any of the ATOS Gliders and use of the Flaps in flight

There is only one appropriate way and one appropriate speed to trim your glider. Movement of the Hangstrap is the only appropriate **way** to trim a glider that is in factory specs. I would advise to move the Hangpoint only ¼ inch at a time to change trim speed - the glider's trim speed is very sensitive to the Hangpoint. The only **speed** to trim your glider to is **Best Glide Speed** and this should be done in the correct flap configuration for Best Glide. Best Glide Speed is 30-32 mph and the correct Flap Configuration for Best Glide is 5 degrees.

To find the correct trim point, you want to move your hang point such that the stable, HANDS-OFF, TRIMMED SPEED is 30-32mph with THE FLAPS SET AT 5 DEGREES OF POSITIVE INCIDENCE. When the flaps are off (against the keel), they are actually -4 degrees (a high speed glide setting). Incidence is relative to the Chord, not the stinger. The trailing edge of the flap will be off the tail stinger about 2 ½ - 3 inches when you have 5 degrees of positive incidence. Again, TRIM THE GLIDER FOR BEST GLIDE!!!! That's 30-32mph, 5 degrees of flap. Move the Hangstrap forward to increase speed – rearward to slow. Make a mark (or marks) on the keel to help you track where you're at. There's an index on the keel of the newer gliders.

Now that the glider is Trimmed properly, **when thermaling**, you should be able to pull on 20-25 degrees of flap and find that the glider is now slowing to a trimmed speed of 24-26mph. For inter-thermal glides (35-45+mph), you want flaps configured at 5 down to 0 degrees flap. Remember that zero degrees of flap is relative to the chord – not the keel stinger. At 0 degrees, the trailing edge of the flap is now approx 1½ in. off the keel stinger. Flaps off (and Tail off on the VR) should be reserved for that end-of-the day, calm air, 15 mile glide at 50mph to win the last day of the World Championships. Use of the flaps during flight is largely dedicated to managing your trimmed speed.

Use of the flaps during the landing phase is dedicated to glide path control. Now you're going to use full flaps and a 30mph approach speed to come in steep, burn up energy quickly, and provide a lower touch down/stall speed.

IN SUMMARY: TRIM THE GLIDER TO BEST GLIDE SPEED AND FLAP CONFIGURATION

FOR THERMALING, go to 20-25 degrees flaps – your now 'trimmed' at 26mph

FOR INTER-THERMAL GLIDES, use 0-5 degrees of flap to be 'trimmed' at 35-45 mph